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A PRELIMINARY REPORT OF THE POSSIBLE ETIOLOGICAL FACTOR IN THE CAUSATION OF INFANTILE BILIARY CIRRHOSIS

RAO BAHADUR T. S. TIRUMURTI, B.A., M.B. & C.M., D.T.M. & H. etc.,

AND

K. NARAYANAMURTHI, M.D.,

Research Department of Pathology, Medical College, Madras.

Varieties of Castor Plants and Seeds: There are many varieties of castor oil plants but for our purposes they may be divided into two varieties, which are known respectively as "Fructibus majoribus" and "Fructibus minoribus". The plant is described by some botanists as a tree and by others as a shrub, either an annual or biennial growing in sub-tropical countries. It grows to a height of 10 feet and is cut yearly for use as fuel. Since the root is perennial, it puts out shoots next year and hence the plant is often mistaken for a shrub. It grows easily from seedlings to a fairly good height within a year into a spreading tree, bearing flowers and fruits all through the year. The stem is round, thick jointed, channelled, glaucous, purplish red colour upwards; leaves alternate, large, deeply dividing into seven segments on long tapering purplish stalks; spikes spring from the divisions of the branches, the males from the lower part of the spike and the females from the upper part. The capsules of the fruit are prickly; seeds, oval, shiny, having black and brown dots on a grey background. There are many kinds of castor seeds of varying shapes and sizes, available in the market. The skin of the seeds consists of three coverings and it was for a long time believed that only the embryo of the seed was the seat of the purgative principle and, if that part were removed, the seeds might be safely eaten. It has, however, now been proved that the purgative principle is resident in the oil itself. The outer husk, which is thick, does not contain any poisonous material. The endo-sperm of the seed, which covers the thin cotyledons contains a very highly poisonous substance, known as, ricin, which has a toxic and an antigenic principle. The ricin, which is an albuminoid material, is easily destroyed at 100° C. It is also destroyed by the gastric juice.

Castor Oil—Methods of Preparation: The real castor oil used in medicine is from the small size variety of seeds. The oil, extracted from the big seeds, is generally used for lighting lamps, as oil to aeroplane engines, as a medicine for horses and as purgative for human beings. But in our Presidency the castor oil is extracted from the big variety seeds and so it contains very little of the purgative principle. The home-made castor oil is from

the smaller seeds. It has a heavy disagreeable smell, as the seeds are being roasted, previous to boiling for the purpose of extracting the oil. The colour is darker and the oil has a peculiar odour. The mode of preparation of the oil varies greatly. It is given in the "Report on the Fixed Vegetable Oils",[1] sent to the Madras Exhibition as follows:— The seeds, having been partially roasted over a charcoal fire, both to coagulate the albumin and to liquefy the oil, are then pounded and boiled in water, until the oil rises to the surface. Another method of extracting the oil is the following:—The seeds are soaked overnight in cold water, boiled for two hours and then dried in the sun for two days. Then they are bruised in a mortar mixed with water and boiled, till the oil appears on the top. The oil is then strained off. If cocoanut water be used, the oil has a paler colour and clearer appearance. The third method is to free the seeds from dust and then crush them between two rollers. The husk is taken out by sieving and put in a clean gunny bag. Then they receive a slight pressure in an oblong mould, which gives a uniform shape and density to the packet of seeds. The "bricks" as they are technically called, are then placed alternately with plates of sheet iron in a hydraulic press. The oil thus pressed out is received in clean tin pans. Water in the proportion of a pint to a gallon of oil is added and the whole is boiled, until the water has evaporated; the mucilage will be found to have subsided and encrusted at the bottom of the pan, whilst the albumin is solidified by the heat. Great care must be taken in removing the pan from the fire. The oil is filtered through a blanket or flannel and put in cans for export. Oil yields 47 to 50 per cent. of the seed. The present method used for extraction of the oil in the Madras Government Medical Stores is almost identical with the one described above. The big variety seeds are hulled, put in small bags of flannel, and submitted to a hydraulic press. The oil so extracted is an emulsion with water. This is taken and put in big cauldron, through which steam is passed. 300 lbs. of oil require 80 lbs. of water with steam passed at 120° C. to get a pure, non-smelling, thin, almost colourless oil. The oil prepared by this process is known as the cold-drawn oil in contrast to the home made oil obtained by frying the seeds. Whether cold-drawn or otherwise, the oil has to be boiled, partly to coagulate the albuminoid ricin, and partly to denature it. What is usually sold in bazars as pure castor oil is really the oil procured from mixing croton oil seeds with the rejected cake and extracting oil therefrom. The purgative value in such oil is undoubtedly greater than in the castor oil supplied by the Madras Medical Stores.

In France, the seeds are bruised and then put into the cold press. The oil thus expressed is allowed to stand for sometime to permit the albumin and the mucilage to settle down. Sometimes it is filtered to separate them more rapidly. The oil, so made in France and Italy, is much weaker than the oil procured in the tropical countries. Another method is to macerate the bruised seeds in cold alcohol, by which 6 oz. of oil is obtained from every pound of the seeds.

Chemical Composition: The chemical composition of the entire seed is as follows:—

Castor Oil

1. Ricin, toxic and antigenic properties
2. Glycerols, palmitic and stearic acids (fats)
3. Ricinoleic acid (purgative)
4. Ricinine (alkaloid).

Administration of Castor Oil to Infants: In our preliminary enquiry, we have noticed that several children, who came under our observation and treatment for infantile enlargement of liver and spleen gave a history of administration of castor oil (oleum ricini) since birth. The dose of castor oil used varies very widely from two drams to one ounce and a half, though the therapeutic dose is only from one to two drams. The castor oil that is home made is given to the infant from its birth both in the morning and evening, for three months and, afterwards once a day for six months. Thereafter the oil is given once in every four days up to the ninth month of the child and later once a week up to two years.

Action of Ricin: Three castor oil seeds are reported to have killed an adult human being.[2] This is due to the ricin, that is contained in the seed. The ricin is destroyed by the enzymes, when swallowed. There is very likelihood of contaminating the oil with the ricin. The ricin is a toxalbumin and

is highly poisonous. By repeated washings of the pulp, the ricin, which is soluble in water, is partly taken out and the rest, contained in the oil, is coagulated and denatured by heat. Since ricin has two biological functions, one toxic and the other antigenic, the latter is responsible for making the child immune to very large doses of castor oil. The toxin is found to be destroyed by the addition of hydrogen peroxide, by potassium permaganate, halogens and also by ultra-violet radiations, without affecting the antigenic properties of the ricin.

Animal Experiments: Castol oil, when given to animals (guineapigs and rabbits), passes out of the stomach unchanged. In the duodenum and partly in the small intestines, it is saponified by the alkaline juices of the pancreas and the bile, and converted into simple glycerol and ricinoleic acid. The ricinoleic acid is a powerful irritant to the intestines, causing vigorous peristalsis. It has also been found, that if the castor oil is saponified with KOH or NaOH, and given to the animal, vomiting is caused on account of the irritation it produces in the stomach.

Ricinoleic Acid: It is reported[3] that sodium ricinoleate is a mild antiseptic and certain group of bacteria, *e.g.*, B. tularense, B. pestis, V. cholera, become avirulent in a solution of sodium ricinoleate. It was also further found that its antiseptic properties, although marked, are limited to certain bacteria alone. We have found on culture that, after administration of castor oil, the intestinal coli group of organisms are not affected in their growth on McKonkey's media; the intestinal bacilli are unaffected by soaps. But bacilli found in the respiratory tract and buccal mucous membrane, such as Vincent's angina, diphtheria, Pfeiffer's bacillus, meningococcus, brucella abortus and tubercular bacilli are destroyed by the antiseptic properties of the sodium salt of ricinoleic acid. The streptococcus is rapidly killed but the staphylococcus remains unaffected. Yeasts and other fungi are not affected at all.

Estimation of Ricinoleic Acid: We have found on analysis that the castor oil, used for different infants, suffering from the disease, contains varying quantities of ricinoleic acid. As there is no specific test for the determination of recinoleic acid in different brands of castor oil by any calorific method, we have resorted to the tedious process of determining it by finding the acetyl value. We are trying other methods for determination of the ricinoleic acid content in different brands of castor oil. We are at present engaged in the study of the possibilities of its determination by the polarimetric method, when the oil is in very small quantities, with the view that it can be estimated from the portal blood of an experimental animal.

Effects on the Liver: We are inclined to believe that ricinoleic acid is absorbed by the portal vein as the sodium or the potassium salt of ricinoleic acid and that this acid is a powerful irritant to the liver cells, bringing about fatty degeneration and necrosis. We presume that, when castor oil is given in big doses (with its impurity of ricin), though the oil is denatured, owing to different strengths of ricinoleic acid content, the liver cells of the child are bombarded day after day by the toxic principle with the result that necrosis and fatty degeneration occur, to be followed later by replacement fibrosis. The clinical sign of fatty changes is a hypertrophic condition of the liver, which will be without any association of jaundice. But later on, on account of the formation of thin strands of fibrous tissue, the liver shrinks remarkably, becomes atrophic, as a result of which, ascitis and œdema of the legs are noticed to occur in children.

We believe that the occurrence of jaundice is due to infective cholangitis, as we have shown that the intestinal bacteria occurring either in the duodenum or in the jejunum, are unaffected by the antiseptic properties of the saponified castor oil, infection probably takes place *via* the lymph channels.

Microscopic examination of the stool in every child under treatment revealed the existence of fat globules in large quantities in the stools. This observation once again proved that the seat of the mischief is at the duodenum and all the fats taken with milk are not completely saponified by the bile and pancreatic juices. It is possible that the secretion of pancreas is either defective in its quality or quantity. A complete splitting of the fats does not take place and hence the occurrence of fat globules in the stools. In experimental puppies of one month old, Lahiri[4] (1936) produced fatty degeneration in the liver cells, by feeding them on excessive

fat. He further adduced evidence to show that cirrhosis was the result of infection, with any intestinal organism like B. coli or streptococci, in puppies where liver is already damaged by over-feeding with fat. Though our approach to this problem is in an entirely new line, we arrive at the same conclusion, namely that fatty degeneration is brought about by ricinoleic acid or ricin and that the replacement fibrosis brings about the cirrhotic condition.

The experimental data with the histopathological condition of the liver after injections of ricin and ricinoleic acid in different animals will be submitted later.

References

1. Report on the Fixed Vegetable Oils, Madras Exhibition, 1918.
2. Lyon's Medical Jurisprudence for Indian, End., 1935, p. 565.
3. Viale, H.—Academie Sciences, Paris, 1933, p. 197.
4. Lahiri—Role of Infection in the Etiology of Infantile Cirrhosis of the diver. *I. M. J.*, 1936, June, p. 313.

OBSERVATIONS ON CLINICAL ASPECTS AND TREATMENT BY SERUM OF ENTERIC FEVER IN BOMBAY

PURSHOTAMDAS T. PATEL, M.D. (Lond.), M.R.C.P. (Lond.), D.T.M. & H. (Cantab.), F.C.P.S. (Bom.),

Hon. Physician, K. E. M. Hospital; Medical Superintendent, City Fever Hospitals, Arthur Road and Maratha Tuberculosis Hospital, Bombay.

Enteric fever is endemic in Bombay but during the years 1937 and 1938, it has occurred in the form of mild epidemics. The total number of cases admitted to the City Fever Hospitals, Arthur Road, is 293. Most of the cases were admitted during the second week of onset or later still.

The lowest age incidence was 4 years while the highest was 44. Males were affected in a greater number than females, the ratio being 4:1. Certain localities in the city showed a far greater incidence than others, thus the highest number of cases occurred in Dadar, Mahim and Parel.

Incidence from admissions in Arthur Road and K. E. M. Hospitals.

	1930	1931	1932	1933	1934	1935	1936	1937	1938
K. E. M. Hospital ...	65	62	93	109	104	114	178	254	up to May 125
Arthur Road Hospital ...	4	3	3	8	32	3	8	106	up to Dec. 187
Total ...	69	65	96	117	136	117	186	360	312

Clinical Features

Out of 293 patients only 65 had a typical temperature chart with an initial ladder-like rise in the first week followed by high sustained temperature during the second week and defervescence during the third week. The pulse was slow in 22·2 per cent. while in 33 per cent. of cases it was not at all slow, and in 29 per cent. of cases, it was definitely rapid.

Tongue—It was dry, typically whitish or brownish in the centre and clean at the margins and tip in 39·5 per cent. of cases.

Spleen—It was palpable in 22·2 per cent.

Bowels—178 cases were constipated during the treatment while 38 cases had diarrhœa at one stage or other.

Rose spots—They were found only in 9 cases.

Meningism—There were 6 cases which showed meningeal symptoms characterised by drowsiness, rigidity of neck, etc., of which 3 had these symptoms on admission.

Complications

There were 27 cases of abdominal distension. Intestinal hæmorrhage was noted in 25 cases, either at the end of the second week or during the third week. Sometimes there was a massive hæmorrhage (2 pints in one stool) but more commonly small amounts were passed frequently.

Pneumonia and broncho-pneumonia were found in 56 cases.

Cystitis and pyelitis at some stage of the disease, but usually at the end of third week or in fourth week were found in 7 cases.

Serum sickness and arthritis were found in 6 cases.

Parotitis occurred in 6 cases.

Marked anæmia was noticed in 9 cases.

Hæmorrhage and pneumonia were the most fatal of the complications.

Relapse occurred in 18 cases.

Diagnosis

Apart from clinical features, diagnosis was confirmed by laboratory tests.

Widal Reaction—It was found positive for B. typhosus in dilution of 1 in 50 or above in 203 patients.

In 4 cases Widal was positive for para A in dilution of 1 in 100 or above.

Blood Culture—In 9 cases blood culture was positive for B. typhosus while in one case both Widal and blood culture were negative but examination of urine and fæces during the fourth week gave a positive result for B. typhosus. Signs and symptoms in this case were very suggestive of enteric fever.

Lymphocytosis—A lymphocytosis of 35 per cent. or above was present in 58·5 per cent. of cases. This shows that the differential count is of value in strengthening the suspicion where lymphocytes are increased, but a normal or low count does not exclude the possibility of enteric infection.

Treatment

Prophylactic—Vaccination with T. A. B. There were 8 cases who had received T. A. B. vaccine, either one or two injections prior to their admission in the hospital. In two of them the course was very severe and they expired of hæmorrhage. In the remaining 4 cases, the course was mild and the temperature was not at all typical being intermittent and irregular. It appears that the two cases who died probably received the T. A. B. vaccine during the incubation period. No opinion could be given on the effect of T A. B. vaccine upon the course of illness as the number of cases is very small, but the very fact that very few persons developed disease out of those vaccinated, indicate that T. A. B. has definitely got a preventive effect and its use as a prophylactic must be enforced.

General—Usual symptomatic treatment and care in diet and nursing were adopted.

Specific—In a certain number of cases anti-typhoid serum was used as a specific treatment in addition to routine treatment.

Treatment by serum proved to be a failure in the past but recently Felix working at Lister Institute, London, reported good results by using special strain of antigen, *viz.*, "Vi" antigen. Other workers in the field have also been trying the sera prepared at Lister Institute, but the results are inconclusive. We tried sera prepared by Bengal Chemical & Pharmaceutical Works, Ld. The intramuscular route was chosen as it was found to be safer. The anti-typhoid serum was given during the second week of illness in two doses of 25 c.c. each, usually on two consecutive days. In all 59 patients were treated with serum; out of these, 5 received intravenous injections. In the latter severe reactions occurred, exhausting the patient, and the temperature came down to normal on the next day, but it rose again on the third day and then took its usual course. Hence this route was discarded in favour of the intramuscular route.

It was found that anti-typhoid serum had no effect on the course of complications but out of those who received serum at an early stage, fewer complications were noted, in comparison with those who did not receive any serum treatment.

Number of cases treated with serum is 59.

Uncomplicated		Complicated		Incidence of complication
Cured	Died	Cured	Died	
35	2	14	8	37·2%

Number of cases treated without serum is 103.

Uncomplicated		Complicated		Incidence of complication
Cured	Died	Cured	Died	
87	1	78	25	53·9%

Serum had no effect on the mortality rate.

Results of serum-treated and control cases are given in a tabular form below.

Mortality—There were 56 deaths in 293 patients giving a total mortality of 19·1 per cent. There were 16 patients who died within 48 hours of admission which being excluded, the mortality for treated cases was 13·6 per cent.

Nearly half the deaths occurred in the second week.

Conclusion

(i) It appears that the present epidemic was of a milder type and that it was rather an exception than the rule to find a patient developing a classical picture of enteric fever, as in a very small number of cases it was noticed and most cases showed both irregularity of temperature and other symptoms, and were not at all typical in their manifestations.

(ii) Anti-typhoid serum had no effect on the mortality rate.

References

Annual Report of the City Fever Hospitals, Arthur Road, Bombay for 1937.

Beckman—Treatment in General Practice. Published by W. B. Saunders, First Edition, 1931.

Patel, P. T.—Infectious Diseases and other Fevers of India, 1929.

Topley and Wilson—Bacteriology. Published by Edward Arnold, Second Edition, 1936.

Wilcox—*B. M. J.*, 21st May, 1938, pp. 1085-90.

UTERINE INERTIA

SITI KANTO DAW, M.D. (Germany), L.M. (Rotunda), D.L.O. (Vienna).

Chittaranjan Seva Sadan, Calcutta

Uterine inertia is one of the most vexed and by no means unusual problems that a private practitioner is confronted with, in conducting his obstetrical cases.

As we all know, there are three causes of uterine inertia. They are as follows:

(a) Weakness of the nerve impulse to the uterine muscle.

(b) Weakness of the uterine muscle itself and

(c) Mechanical interference with contraction.

But it is fair to assume that the uterine inertia is a disturbance of the autonomic system of the splanchnic area, and this system is under the control of the endocrine glands. Therefore the inertia is more or less due to an endocrine disturbance.

Uterine inertia is again divided into two classes: (a) Primary and (b) secondary.

The first two causes are attributed to the primary and the third to the secondary inertia. Weakness of the uterine musculature may be due to multiparity, hydramnios, twins or early rupture of the membranes.

Secondary inertia which is due to mechanical interference with contraction, originates from causes other than those of the uterus itself. They may be due to malpresentations, contracted pelvis, large babies, tumours and distended bladder and rectum.

The Inertia Syndrome: J. R. Goodall states that during the antenatal care, one may be confronted with a number of cases where the patients are fat,

short-necked, flat-nosed and nasal speeched. When they have been in labour for some time, many of them may present signs of inertia. Their sigmoid or the ascending colon may be distended, causing the uterus to be displaced to one or the other side of the abdomen. The axis of the uterus being displaced, the uterine forces are misdirected and dystocia is enhanced. Pains progress satisfactorily for some time, after which they may stop or the uterus may assume a peculiar hourglass contraction.

Primary Inertia

It is common in a young primipara, who allows her nervous stimuli, which are so essential in causing labour, to be wasted during the early part, through fear and apprehension. We must not lose sight of the fact that early rupture of the membranes due to unnecessary bearing down, results also in this type of inertia. I have already mentioned that, weakness of the musculature happens, due to hydramnios twins, etc. As a result of the overstretching, uterine muscles cannot act very well—hence inertia ensues. Early assumption of recumbent, especially lateral position, tends to inhibit uterine activity. There is a class of cases where, in spite of the absence of outside causes, normal stimuli from the lower uterine segment are wanting. These cases invariably lead to inertia. Hormones also play an important role. Oestrin, Pituitrin and corpus luteum have something to do in carrying out the labour. When they fail, the mechanism of labour is interfered with. Very good results have been obtained when œstrin has been administered in big doses in such cases of primary inertia.

For the safety of the child and that of the mother, it is important to know whether the inertia occurs in the first or in the second twenty-four hours. Therefore, it will be very convenient for us if we divide both the primary and secondary inertia into early and late stages.

We cannot really diagnose a case of primary inertia due to weak nerve impulses. Because there is nothing much to find except the symptoms. But when it is due to the weak musculature, we can find a large and slack uterus of multiparity or some other diseases. The fœtus and pelvis remain normal in these cases and there is no obstruction.

Manifestations: Patient is usually a young primipara (but multiparæ are by no means exceptions to it) whose nervous system might have been strained by her relatives, who have perhaps frightened her by narrating the dangers and difficulties associated with pregnancy. Her labour starts in the ordinary way but after sometime, the pains become sluggish and complete inertia sets in. It may occur either in the first or second twenty-four hours.

The first duty of a doctor under the circumstances, is to diagnose whether the patient is suffering from the primary inertia, or it is really a case of secondary inertia, as the very life of the patient hangs in the balance of his judgment.

He may find that the labour remains at abeyance for hours, or for the matter of that for days. Os, which was dilated before, may even close down. The pains, although feeble and coming at long intervals, may cause severe discomfort to the patient. Sometimes she complains of severe continuous pain, which is due to ineffective contraction of the uters. The doctor who is tired of waiting, may do something drastic at this stage, finding no prospect of a successful labour in near future. Manipulations at this stage, are not only bad but harmful. To him, the golden rule 'to watch and wait' will produce beneficial results. Choloroform will only increase the inertia. Forcing open the cervix *by any means*, in anticipation of hastening the labour, will mean a dead baby and perhaps a badly injured or even an altogether dead mother. The doctor must help the mother in keeping up her energy by asking her to take plenty of rest and removing even the fraction of a doubt from her mind.

In treating a case of primary inertia, exclude first of all, the secondary causes. Then arrange for her sleep in the night with a peaceful mind. Note the progress of the labour, particularly when the membranes have ruptured. Unnecessary interference is bad—but you must interfere in correct time also and not, when it is too late.

It has already been told, that when the nervous mechanism is upset at the begining, uterus cannot work. It is same as the method of recharging the battery. Give the patient plenty of sleep and cut off her mind from the uterus. Maintain the patient's strength with food which should be taken in small

quantities but frequently. If there be vomiting, dehydration and acidosis ought to be prevented by intravenous glucose 10% and saline injection (500 c.c.), not repeated more than once a day. Relieve the distension of rectum and the bladder. Keep vagina sterile by postural method and by the intervaginal injection of mercurochrome under pressure so that it may be spread all over. Give morphine ¼ grain and scopolamine 1/150 gr. hypodermically at night. Do not give it during the day. The patient should be examined thoroughly before administering morphia to be sure that there is no disproportion or malpresentation. That usually carries through, but in a case of prolonged labour, it may be repeated. Long hot vaginal douches during the day are very helpful. In favourable cases, one may find the os about three quarters dilated or the head may be actually on the perineum. Manual dilatation of the cervix may be done in the late first stage and one may then deliver by forceps with caution (bearing in mind that the mother is already exhausted).

But there are some cases, where although morphia has been administered overnight, os has not dilated more than three fingers. Patient feels a little better and her pains improve. But somehow or other she is frightened again and the pains cease to act properly. She becomes fretful and grumbles about the labour. But if there is no disproportion or malpresentation and if the membranes remain intact, the doctor need not worry over the prolongation of the labour alone. There is no cause of real anxiety if the membranes ruptured even thirty-six hours ago. But one cannot give any guarantee for the baby or about asepsis of the patient after that. Do not interfere on the second day. Give scopolamine 1/150—1/200 gr. hypodermically during the day to prevent her from fussing about. It may be repeated twice, if necessary. The cervix may be found about four fingers dilated by the evening or it may not change at all. During the same evening she may be given morphia ¼ gr. or chloral hydrate or three fifteens, *viz.*, Pot. Brom. gr. xv, Chloral Hydrate gr. xv and Tr. Opii m xv for one dose.

A large dose of chloral hydrate 1—2 drams by small rectal enema (which is composed of saline, glucose and chloral hydrate together) may be administered, provided the head is not on the perineum.

If she does not deliver on the third day, the doctor should think of stimulating the uterus during the day and applying sedative in the night. During the third day, the os may be two, three or four fingers dilated. One may begin to worry about the baby or be fed up of waiting. Stimulation of the uterus is permissible but never with oxytocic drugs. Unless given with extreme care, oxytocic drugs are very dangerous. They can kill the baby or produce contraction ring dystocia and reduce the placental site. There are people who advocate a single dose of quinine or a very minute dose of pituitrin. Quinine, when used should be given in small doses, as big doses paralyse the uterus. In most cases, it is insufficient to stimulate the pains. Thymophysin with calcium is good for the purpose. Belladonna is helpful in case of a rigid os. But Dr. Davidson, the master of the Rotunda, prefers the use of œstrin and stimulation by local methods. Local stimulation by hot vaginal douche high up, helps the uterine action. Oestrin is used for the same purpose.

Although there is the possibility of damaging the baby, still it is good. 10,000 units, two to three times a day are given. Do not exceed 100,000 units altogether. There are some cases where the os is half dilated and pains are not very strong. If there be no disproportion and if one has the power of selection he may rupture the membranes, which will bring on the pains. But it is best done by a skilful obstetrician, as more harm than good may happen otherwise.

In spite of all these treatments, the os may not dilate at all or it may be three or four fingers dilated. Membranes may rupture and there may be fœtal distresses. Meconium may come out and the discharge per vaginum may be smelly. If it is a case of an elderly primipara, whose possibility of further conception is doubtful and if she does not yield to stimulations and sedatives, the question of lower Cæsarean section might be contemplated under the best available circumstances. In a young primipara, where there is no disproportion, do not hastily go in for a section, because of the scars that may ensue therefrom and jeopardise her future pregnancies. The best policy is to wait and see whether delivery per vaginum is possible. In case of fœtal distress, tentative forceps may be applied where the os is three

quarters dilated, head being in the midstrait or high up.

Secondary Inertia

This is also called atony of the uterus which is nothing but its exhaustion. The process of labour begins normally but soon the uterine actions cease. The contraction and retraction of the uterus stop and the labour comes to a stand still. We, therefore, find that in spite of the labour starting normally, it stops midway for some obvious reasons, without any successful termination. It occurs mostly in multiparæ and may happen any time during the labour, especially in the second and third stages. Even after the completion of labour it may be ushered in with the loss of retracting power of the uterus.

Causes: We have already seen that the secondary inertia supervenes in malpresentations, which are apt to be associated with obstructed and protracted labour. Large babies, contracted pelvis, tumours, distended bladder and rectum also contribute to the causes of this type of inertia. Complete atony of the uterus means temporary paralysis of the uterine nerves. Therefore, some defects of the nerves which are again dependant on the hormones, may be considered as the probable reasons for the inertia. Deep anæsthesia, shock and anæmia due to antepartum hæmorrhage will predispose to the causation of inertia.

Like the primary inertia, secondary inertia is also divided into an early and a late stage for the guidance of the doctor and the safety of the mother and the baby. One must know the time when the membranes ruptured, because the uterus and the sac may get septic in case of a long labour. Disproportion is, however, the main cause of the secondary inertia. It happens mostly when the doctor fails to diagnose timely a case of a face, brow or breech presentation or he overlooks an expectant mother with contracted pelvis. Sometimes he may be confronted with a case like that already in labour.

The head of the fœtus remains unfixed and there are all the signs of disproportion present. On examination may be found the Bandle's ring above the symphysis pubis.

Vagina may be hot and dry. Liquor amnii is drained away and there is a good formation of the caput on the head of the fœtus. Temperature and pulse of the mother may be raised and there may or may not be any dilatation of the cervix.

Treatment

Treatment should be directed towards the cause of the secondary inertia. Treat the cause and the patient is cured and saved. One must remember that no oxytocic drug should be used in these cases as the uterus is already exhausted. There is the necessity of delivering the head as it may be held up in the rigid perineum. Any way, in secondary inertia active treatment for the removal of the cause, *i.e.*, section, version or the application of forceps is necessary. But in many cases, due to the close coaptation of the uterus to the child due to the rupture of the membranes, for a long time, it becomes impossible for the doctor to perform version and extraction. Passive treatment, as the use of sedative like morphia will not only do no good but will do harm on the contrary. The doctor thereby loses his valuable time to render help when it is absolutely imperative. He must empty the bladder and the rectum which form also an essential part of the treatment. Pituitrin should be given after the delivery of the child, as these cases of secondary inertia invariably suffer from post-partum hæmorrhage.

We shall have to bear in mind certain points of danger in connection with the primary and secondary inertia. If there is no unnecessary interference in the first twenty-four hours of primary inertia, there is nothing much to be afraid of. So also is the case, if the membranes do not rupture even later. If there is an early interference there may be trauma of the soft parts and injuries to the baby. P. P. H. is sure to follow.

In the early part of the secondary inertia there is the risk of sepsis. Therefore, do not make a vaginal examination unless it is imperative. In the second twenty-four hours, adequate steps should be taken to deliver the child in time, otherwise it will be lost. The factor of sepsis remains the same.

In conclusion, I like to add that a judicious following of the principles enumerated above, without too much fuss and interference, will tide over most of the inertia cases to the satisfaction of the mother and the doctor.

ACIDAEMIA

SUDHANSU SOBHAN MAITRA, M.D. (Patna),

Allahabad

The term acidæmia replaces the much controversial old nomenclature acidosis in the medical literature which came into existence long before our adequate knowledge of the reaction of blood and its hydrogen ion concentration maintenance mechanism. Interpreted in the medical light of the present day the word acidæmia would mean an increase in the concentration of hydrogen ions in the blood. But it must clearly be understood that life is not compatible with a wide departure from the normal reaction of the blood. And therefore only a slight variation is expected and met with in clinical practice. It is possible for a patient to be in a condition of extreme acidæmia with a normal hydrogen ion concentration in the blood. The clinical manifestations met with are solely due to derangement of acid-base equilibrium causing a depletion of the alkali reserve. The word acidæmia, therefore, should convey a condition of alkali reserve shortage in the system which, if allowed to proceed further, would result in the death of an individual.

The sensitive mechanism which keeps the blood reaction constant is also capable for dealing with the emergencies arising out of the adverse conditions within a feasible limit. It is only when this limit is transgressed that the symptoms appear. As long as the blood reaction maintenance mechanism is capable of dealing with the adverse causes the symptoms do not appear and we have what is known as compensated acidæmia. On the other hand when the mechanism breaks down completely with an appreciable shortage in the alkali reserve of the system the condition of uncompensated acidæmia makes its appearance.

A clear conception of the factors concerned in the maintenance of a constant hydrogen ion concentration in the blood is needed for the proper understanding of the acidæmia. It will, therefore, be not altogether out of place to make a short review of the various factors concerned. They are as follows:

(1) Reactions occurring in blood itself.
(2) The vital reaction of breathing.
(3) Behaviour of the kidney.
(4) Metabolism.

I. *Reactions occurring in Blood.* The proteins and salts such as $NaHCO_3$, K_2PO_4, Na_2HPO_4, NaH_2PO_4 and NaCl in the blood have a peculiar property of reacting with acids and alkalis with the formation of substances which give rise to none or very few H or OH ions and thus the pH concentration of blood is very little influenced. These substances are usually referred to as buffer substances and $NaHCO_3$ is referred to in the text-books as the alkali reserve.

As long as this alkali reserve is sufficient it is axiomatic that no acid stronger than H_2CO_3 can exist in the blood. Whenever any fixed acid appears in the blood a chemical action takes place between it and $NaHCO_3$ with the production of a neutral salt of the corresponding acid and H_2CO_3 is liberated. This H_2CO_3 being much weaker acid is not capable of dissociating into a comparatively larger amount of H ions and thus the other acid is effectively dismembered of its H ions. Moreover H_2CO_3 being a volatile acid is quickly excreted via lungs. The kidneys excrete the neutral salt.

II. *The Vital Reaction of Breathing*: The minutest increase in the pH concentration of blood stimulates the respiratory centre and produces hyperventilation and washing off of the CO_2. It will be interesting to note that the respiratory centre is stimulated directly and also reflexly through the nerve endings in the sinus caroticus and aorta.

III. *Behaviour of the Kidneys*: Whenever there is a tendency for the hydrogen ion concentration in the blood to increase the kidneys help to maintain the equilibrium by excreting more of acid sodium phosphate. It is also reputed to secrete ammonia under these circumstances.

IV. *Metabolism*: The final end product of protein digestion, the amino acids normally give rise to urea after their deaminisation in the liver. But with the advent of stronger acids in the blood ammonia is formed which there combines with the acid and the urea output is considerably lowered. The normal ammonia cœfficient of about 5% thus may be increased to 18% in acidæmia.

Aetiology

The acidæmia results invariably either due to the increase or appearance of fixed acids or due to the increase in the CO_2 content of the blood. The acidæmia due to increase in the fixed acids is referred to as nongaseous acidosis and that caused by the latter is termed as gaseous acidosis.

Non-gaseous Acidosis: An increase in the fixed acids of the blood whatever may be the cause leads to one final result, *i.e.* shortage of alkali reserve and we have the condition of non-gaseous acidosis.

The example of this is met with in individuals undergoing strenuous exercise and acidæmia results from lactic acid accumulation. Similarly acidæmia may be due to large doses of ammonium or calcium chloride administered on therapeutical grounds. In diabetes mellitus, starvation vomiting of pregnancy, vomiting of chloroform or ether anæsthesia there is acidæmia from ketosis. Tissue anoxæmia resulting from the failure of circulation, respiration or carbon monoxide poisoning increases the fixed acids and precipitates acidæmia. It tends to occur in the course of infectious fevers due to partial starvation and increased breakdown of proteins. Failure of the kidneys as a result of nephritis, acute or chronic, hinders the excretion of a fixed acid and makes us familiar with the acidæmic dyspnœa of kidney diseases. A combination of the above factors are probably responsible for the acidæmia of infantile diarrhœa. In acute yellow atrophy and yellow fever, probably injury of the liver, plays an important role. Lastly we come across this variety of acidæmia in black water fever and cholera.

Gaseous Acidosis: Anything which tends to increase the production of CO_2 or prevents its excretion favours the onset of gaseous acidosis.

Experimentally it has been produced by breathing in excess of CO_2. In morphine poisoning where pulmonary ventilation is considerably lowered this variety of acidæmia sets in. Finally a damage to the pulmonary epithelium hinders the diffusion of CO_2 and hence in cases of bronchitis, asthma and emphysema it is not an uncommon accompaniment.

Signs, Symptoms and Diagnosis

Coming now to the question of signs and symptoms it is wise to emphasise the fact that acidæmia is not a disease by itself but an effect of certain conditions operating adversely. Hence the clinical picture varies with the predisposing cause. But one outstanding feature of acidæmia is dyspnœa. And an unaccountable dyspnœa met with in clinical practice should always arouse suspicion. Headache, nausea, vomiting, neuritis and pyrexia may be met with. Examination of the urine would reveal an increase in the ammonia coefficient. Estimation of blood alkali reserve by Van Slyke's method will show a decrease in the CO_2 combining power of the blood plasma. Normally it is 55 to 70 volume per cent. whereas in cases of acidæmia it may be as low as 20 volume per cent. A fall in the CO_2 tension of the alveolar air from a normal of 40 m.m. to 20 is a conclusive evidence of acidæmia. The various tests mentioned above require an efficient laboratory which unfortunately is a rarity in the realm of general practice. But a very simple test has been devised in this connection. It passes by the name of Sellard's test and consists of an administration of sodium bicarbonate in 5 gr. doses every hour to render the urine alkaline. In normal individuals the urine should become alkaline after a single dose. Greater the acidæmia more the alkali requirement.

Treatment

Prophylactic: Prevention of acidæmia is ensured by a liberal supply of carbohydrate and administration of sodium bicarbonate orally. In cases of diabetes mellitus an adequate amount of insulin should be combined to make the prophylaxis a success. Preliminary starvation and administration of purgatives prior to anæsthesia should be discouraged.

Curative: Fair attention should be devoted to the primary cause. In cases of moderate severity a drachm of sodium bicarbonate mixed with an ounce of glucose with enough of water should be adminis-

tered 4 hourly. In children when vomiting does not allow oral administration, one drachm of sodium bicarbonate combined with double of that quantity of glucose dissolved in three ounces of water should be administered per rectum.

In severe cases an intravenous method is the best. 5 per cent. solution of sodium bicarbonate is used. As much as 500 c.c. may be needled depending upon the severity of a case. It should, whenever possible, be combined with 25 per cent. glucose solution. Circumstances permitting the treatment should be controlled with frequent estimation of alkali reserve.

PROBLEMS CONNECTED WITH THE DIAGNOSIS AND TREATMENT OF LEPROSY

S. THAMBIAH, M.C., M.R.C.P. (Edin.), D.T.M. & H. (Lond.), F.D.S. (Lond.).
Lecturer in Dermatology, Medical College, Madras

Investigation

When a patient presents himself with a depigmented macule the first problem before us is "what is this patch?" If one looks closely into this discoloration or decolourization one has to attend to the following points: general appearance and margin; scaling or non-scaling; disturbance of sensation as regards pain, light touch, heat and cold; if a hairy area, compare it with a corresponding area on the opposite side; does it sweat? The patient may volunteer to give some details. He might have noted that the part was becoming numbed, the hair thinned or shed, the part showed no sweating while the whole body was bathed in perspiration. In some patients, a hyperpigmentation, may be found surrounding the anæsthetic macule and here again a comparison with a corresponding area is necessary. It sometimes happens that while you are worried about the diagnosis the patient volunteers the information that he or she has had the patch under question from birth. I have seen a number of early cases who developed a hyperpigmentation on the face and sometimes of the whole body. It is also interesting to note that a patient who has scabies or tinea in a generalised form affecting more than half the cutaneous surface of the body, when the lesions are cleared by treatment, the patient will be found to be suffering from one of the types of leprosy. Here the patient has lost the protective sensation and he was not able to ward off the infection in the early stage.

Early Patch

The early patch of the maculoanæsthetic type is often ill-defined and the borders shade off gradually into the normal skin. The patch is not scaly and gives an impression of atrophy in the affected area. On one side or on the entire borders small papules may be detected. Very often diagnosis may have to be based on the appearance of the lesion gained by experience. Help may be obtained by searching on the proximal side of the lesion for thickened and tender cutaneous nerve twig or twigs. When this is found one may be greatly struck by the amount of thickening and tenderness of this peripheral nerve filament. The affection of the nerve is a secondary neuritis produced by the overgrowth of the fibrous tissue scaffolding by irritation of the acid-fast bacilli.

Early Diagnosis

A number of questions will now arise from the foregoing statements. Can one recognise and diagnose an early leprosy case with neuritis without the presence of a maculoanæsthetic patch? He will be a bold man if he attempts any such thing. Hundreds of things cause peripheral and other forms of neuritis in general medical field, and one cannot attempt a diagnosis to bring us to a stage earlier than the appearance of a depigmented anæsthetic patch. There is nothing in the body of the patient to mark the entry of the infection comparable in appearance to the primary chancre in syphilis, and again in the

latter disease the actual date of infection from a correct history of exposure can also be determined. We are unable to attain this state of affairs as we are still groping in the dark as regards the method of transmission, and the portal of entry of infection into the system. In other words, as in syphilis and other infectious disease, we do not know the earlier stages of this disease. So, we are ignorant of the transmission, primary lesion indicating the entrance of the infecting organism and also the period of incubation. If the maculoanæsthetic patch results from a secondary neuritis caused by the presence of the bacilli in the nerve sheath planes, then we have to infer that the infection has been fairly long in the body. A mild bacillæmic stage precedes the anæsthetic patch stage. All types of leprosy, in their early stage, are maculoanæsthetic, *i.e.*, maculoanæsthetic type (N_1 of Manila conference classification) may pass on to N_2 and N_3 stages, or become nodulated and pass on to more nodulations and confluence (leonine appearance) or yet again may result in mixed type: The present recognisable early stage is the maculoanæsthetic stages or N_1. I cannot go fully into the differential diagnosis for fear of consuming a large part of your time. One should keep in mind that in the irritative (neuritis) stage, the patch may be hyperæsthetic and not anæsthetic. I venture also to say that very often the thermal sensation becomes lost earlier than either light touch or pin prick. Doubtful patches should be examined once a month, and one will often find that the patch which had only a thermal restriction becomes anæsthetic to all the three forms of sensation, tactile, thermal and painful sensation. Congenital depigmented defects, early cases of leucoderma, tinea versicolor, depigmentation resulting from healing of all types of tineasis and even ordinary simple injuries, and pigmentary disturbances through endocrine dysfunction, dermal leishmaniasis, have to be kept in mind and eliminated. General avitaminotic conditions in children under 12 years usually produce a scaly patch, which leaves depigmented areas on healing. Most of these conditions are easy of recognition and anæsthesia is present in leprosy. Most of the early neural cases do not show bacilli from nasal scraping and smears from slit and curettage of the ear lobe and patch. Still in unexpected cases, without ear lobe thickening, routine examination of the ear puncture gives positive results and this also may be borne in mind before dismissing the patient with a record of negative results.

I need not touch on the nodular type, as there are no problems in this connection. Curettage, smear and staining will fix the diagnosis. What is the significance of the presence of bacilli in nasal and pharyngeal smears? Are the bacilli being eliminated from the body by this channel or is the upper respiratory passage the point of entry and multiplication of the bacilli?

Treatment

Unless the disease is detected in the early stage (N_1 type), the treatment is not effective. Should we treat the early N_1 type? Opinion is much divided on this subject. Some advise keeping the patient under observation, while others are for treating the case to be on the safe side. I am with the latter group. If you treat a number of cases with N_1 type of lesions, while all things else are equal, their response to treatment is varied. Some show a disappearance of the patches with a few injections, while others require twice or thrice the amount. The number of external patches is no measure of the undeterminable systemic changes of the patient.

One cannot be interpreted as stressing the point too much if one advocates that general treatment is as essential as the specific treatment. When patients suffering from leprosy are given highly nutritious food, and their general hygiene improved, the disease undergoes a great amount of retrogression. I often wondered what benefit was confered on pauper leprosy patients who attended the treatment centres when they cannot find a square meal a day and spent a large portion of their time in wandering about begging for food and sleeping in overcrowded places infecting others around them.

Chaulmoogra and hydnocarpus oil have remained our sheet-anchor. Patients who could take the oil by mouth without gastro-intestinal upset, were those who derived the greatest benefit. Pure creosoted oil may be injected with profit and increased according to the tolerance of the patient. It is our custom to change the line of treatment only when the patient has become stationary on the above routine course. A mild protein shock with sterile milk, Aolan, Yatren-Casein, T. A. B. 10-20 millions intravenously once a week (all others intramuscularly) may be tried to get further improvement. Gold preparations as

Auroprotasin, Lopion (Bayer) and Solganal B oleosum have also given good effects in resistant cases. A rest period is always necessary, say one month after an intensive treatment of 2 months. This period may be utilised in improving his general condition by tonics, rest, diet, etc.

The treatment of nodular cases has always remained unsatisfactory. Intradermal infiltrations of oil and diluted esters or iodised Moogrol have only shown partial success. Trichloracetic acid pure may be painted on large nodules, but one is disappointed to see their reappearance in the same place or in some other part of the body. Depigmented patches may be painted with dilute solutions of trichloracetic acid 1 in 2 or 3 or 4 according to reaction and part involved. Face will require dilute solutions. I have nearly ceased attending to patches, as specific treatment, when successful, will cause their entire disappearance and the cosmetic results are highly satisfactory. Their retention will serve us as an index to the success of our treatment.

Beyond rest and antiseptics, perforating ulcer still remains a great problem. The thickened epidermis surrounding the perforating ulcer may be shaved off or burnt with fuming nitric acid to initiate healing.

Lepra reaction rarely occurs in the ordinary course of leprosy. It is a bacillæmia induced by injudicious treatment and rapidly breaking down of granulomatous tissue releasing large amount of bacilli into the circulation. Treatment by antimony tartrate or intravenous injection of mercurochrome is all that is at present in use, but is far from satisfactory. I obtained good results in 2 cases by resting the patient and giving 7 to 10 units of insulin to get over the anorexia and allowing sips of glucose water frequently without the use of the above drugs.

Isolation

When room and facilities are available, nodular cases (infective ones) should be sent into a settlement to quench definitely the source of infection to others. Periodical examination every quarter, of all contacts in an infectious leper's home, will help us to detect early cases and submit them to treatment in time. As most of the infection takes place in early childhood, all school children should be medically examined, and cases detected should be sent up to the nearest treatment centre till a satisfactory certificate can be issued. Good propaganda and a sympathetic medical attendant can contribute much to stamp out this scourge of mankind christened as the "Big Disease."*

*Read at the Scientific Section of the XIV All-India Medical Conference, Madras.

TREATMENT OF EXTENSIVE BURNS AND SCALDS WITH REFERENCE TO A FEW RECENT METHODS

R. SINGH, M.B., B.S.
Firozabad

Cases of burns are increasing daily with the increase of industries and the extended use of electricity and increased popularity of fire works.

The treatment of the first degree of burns and scalds where there is hyperæmia only, is a very easy affair. The best treatment in these cases is an application of boric or boric and zinc ointment. Wet pads of cod-liver oil or amyl salicylate are also useful, but the unpleasant odour is a serious drawback.

While treating a case of extensive burns and scalds the following points should be kept in view:

1. Initial shock which is directly proportional to the extent of the body surface involved.

2. Secondary shock which supervenes about six hours later is due to diminution of available body fluids, mainly due to shortage of plasma and chlorides.

3. Acute toxæmia may be induced by absorption of toxic material from the burnt area.

4. Septic toxæmia may occur later owing to the difficulty of preventing secondary infection.

5. Healing in such cases may be associated with contractions and other deformities.

General Treatment

1. Management of shock: After rendering efficient first aid, the following treatment may be carried out:

(a) Morphia injection at once in all cases excepting children below the age of 6 years but if urgently required may be given with precaution in very small doses.

(b) The foot of the bed to be raised.

(c) Electric cradle for 15 minutes stat, and every two hours. Hot water bottles.

(d) If pulse is very feeble, cardiazol, or coramin should be given at once.

(e) Two pints of hypertonic saline with 5 per cent. glucose may be given by the rectal drip method but in urgent cases, it may be given intravenously.

2. Nursing: A careful nursing goes a long way towards early convalescence.

3. Diet: Light and nourishing diet are of great value. Glucose and, occasionally, brandy will be found of value.

4. Anti-tetanic Serum: A prophylactic dose of 1500 units should be injected in every case.

Local Treatment

Picric acid and tannic acid solutions are in common use nowadays but I have found that the latter is preferable.

1. Tannic Acid Treatment: Tannic acid 5 per cent. with hydrarg biniodide (1 in ten thousand solution) is the most effective lotion which I have used on most of my patients. Pain is almost instantaneously relieved after the first spray and consequently shock is minimised. The action of the tannic acid in preventing shock and acute toxæmia is explained by Davidson as follows:

"Toxæmia set up by the absorption of decomposed material in the burnt area, is prevented by rendering them insoluble. Coagulation is produced on the surface of the wound due to the precipitation of the proteins and this appears to prevent the absorption of the toxic substances."

Details of the Tannic Acid Treatment: The blisters should be nipped off under general anæsthesia with all aseptic precautions and all the raw areas should be thoroughly sterilised with biniodide spirit and then washed with ether ethylacetate or benzene to remove grease. The sterilised part should then be sprayed with freshly prepared tannic acid and biniodide lotion every half hour till a thin eschar is formed. The margins are to be painted with 1 per cent. gentian violet to avoid sepsis getting in. We should not spray long so as to make a thick eschar because this takes a long time to peel off. If some of these parts get septic they should be cleaned and resterilised as before and then resprayed with tannic acid lotion till an eschar is formed; this latter eschar is very thin and peels off very easily.

This method is utilised two or three times and gives very good results. Injection of atropine (1/200 grains) may be given every 3rd or 4th day, if the spray is continued as a preventive against hypostatic pneumonia. When the eschar peels off and if any raw area is left, it should be dressed with liquid paraffin, cod-liver oil, embrine ointment, or with chloretone emulsion (Chloretone gr. x, Scarlet red gr. x, Liquid paraffin oz. ii and Aqua oz. iv).

This will heal the raw area in two or three days' time with no cosmetic defects, contracture, or scarring. In many cases where spraying alone is not successful and coagulum does not stay, fomentations of a strong solution of tannic acid with antiseptics to the denuded area will induce coagulation. If some of the parts still remain septic, it should be dressed with eusol lotion.

The face should be sprayed very cautiously so as to avoid the scabs on conjunctiva and mucous membrane of the lips.

N. B.—A stale solution of tannic acid must never be used. The following preparations are also available: (a) Tannafax seems to be the best. Its contents are tannic acid with 5% phenol in a water soluble base. It does not contain any sort of grease. It is better than tannic acid spray in many respects such as it does not keep the bedding wet and thus the complications like pneumonia are avoided, it can be peeled off without causing any pain, it is ready for immediate application, it may be applied on the face without causing any harm or cosmetic defect to the

eyes, it can be used in all stages. It is applied lightly and allowed to dry to form a black coagulum which readily peels off leaving behind a slightly pink surface. (b) Collosal tannic acid 25% is supplied in sealed ampoules. The solution is stable and does not get spoiled It is sprayed on the burnt areas with a special instrument supplied with it. (c) Lancet's powder or tablets to prepare fresh solution when needed. Powder—Tannin gm. 1, Sublimate gm. 0·025 for solution in 50 c.c. of hot water. Tablet—Tannin gm. 1, Sublimate gm. 0·025, Boric acid gm. 0·05 for solution in 50 c.c. of hot water.

It is sprayed just like tannic acid lotion. Skin-grafting when necessary should be done at an early date.

2. Tr. Ferri Perchloride Treatment: G. L. Coarn is of opinion that the coagulum formed by tinct. ferri perchloride is better with less chances of sepsis than tannic acid treatment. He advocated that after sterilisation of the burnt areas the latter should be painted with tinct. ferri perchloride followed by a spray consisting of Tinct. ferri perchlor. 150 parts, Sod. hydroxide 3 parts and Aqua dist. 300 parts.

3. Silver Nitrate Solution: Bettman is of opinion that tannic acid lotion spray followed by $AgNo_3$ 10% solution paint, gives a much more satisfactory coagulum with less chance of sepsis. According to him the burnt area is cleaned gently, speedily with green soap and peroxide followed by 70 per cent. solution of alcohol or hexyl-resorcinol. It does not require much nursing, only one application is sufficient. The eschar thus formed is much softer, thinner and rubbery than by tannic acid alone.

4. Cod-liver Oil: Tannic acid treatment is indicated in burns of the first degree. Cod-liver oil is especially effective in burns of the second and third degrees where it hastens the growth of the epithelial tissue, thus avoiding the use of grafting. It is especially indicated where tannic acid is contra-indicated, thus it is a thing of urgent requirement for burns of the conjunctiva and mucous membrane.

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PROTECTION FROM AIR RAIDS

We are afraid that it has not yet been realised in this country that urgent measures for the protection of the civilian population of the larger cities can no longer be delayed. In a previous commentary[1] we discussed certain aspects of this grave problem. A few bombers of a modern air fleet, can inflict many thousands of casualties within the brief space of an hour or less. It is necessary to remember that the chief burden of first aid and even surgical treatment of wounds will devolve almost entirely upon the members of the independent medical profession. It must further be borne in mind that hospitals in this country have nowhere been organised to meet such demands. With the inevitable disorganisation of city transport, destruction of water supply and failure of lighting arrangements, no effective medical aid would be possible without previous detailed organisation.

It would not be out of place, if we refer here to measures which have been taken in London and other important cities. Details of a scheme, whereby hospitals in the London area will be grouped in sectors for the treatment of casualties in time of war, have now been sent[2] to the hospital authorities by the Ministry of Health. The scheme is based on the affiliation of certain casualties hospitals in the more dangerous areas to others in outer zones. The great teaching hospitals in central London, as well as the larger municipal hospitals possess the requisite personnel and equipment for dealing with casualties on a large scale. It is proposed that the casualty hospitals near the centre of each sector should be used as far as possible for urgent cases and that the injured should be transferred to affiliated casualty base hospitals in the outer area. Elasticity and freedom of interchange between hospitals are the essence of the scheme, which is designed to distribute the weight of casualties falling suddenly at any given point.

Sir John Anderson, the Lord Privy Seal, announced in the House of Commons during the third week of April, that the Government had decided that "an attempt to provide bomb-proof shelters on a general scale would prove impossible in practice and would be a mistaken policy". On the same day the report of the Lord Privy Seal's Conference on Air Raid Shelters was published as a White Paper. The report rejects deep shelters of both the "focal" (large and concentrated) and the "ramified" (tunnel) type. Instead it plumps for "dispersed" shelters, and recommends in general terms the householder's shelter in or near his premises and the strutted basement.

We have no doubt that our fellow practitioners will agree with us when we declare that some knowledge about these anti-air raid shelters is indispensable if effective and immediate medical aid is to be rendered with the shortest possible delay. Broadly

1. *J. I. M. A.*, Vol. VII, May, 1939, p. 477.
2. *Brit. Med. J.*, Vol. I, 25th March, 1939, p. 634.

speaking air raid shelters may be divided into three categories: (i) "focal" shelters, (ii) "ramified" shelters and (iii) dispersed shelters.

The "focal" shelters of the Finsbury type are designed for large masses of people. The objections to this type are based on the low rate of entrance and the possibility of enormous casualties which would occur if a large bomb did penetrate such a shelter. The "ramified" shelters (the tunnel type) are rejected on grounds of technical difficulty. It has been stated that not more than 16 miles of tunnels with a diameter of 12 feet could be constructed in London in two years and that these would shelter less than 200,000 people. The report assumes that seven minutes would be the maximum probable interval between the warning signal and the arrival of attacking aeroplanes. The report also questions the value of large and deep shelters on grounds of accessibility and the danger of congestion at the entrances.

Finally, the dispersed type of shelters is recommended. The partly sunken steel shelters overlaid with excavated earth is expected to give protection against the splinters of a 500 lbs. bomb "certainly at a distance of fifty feet and, possibly, as little as thirty feet.[3] If war breaks out there is little doubt that cities like Calcutta, Bombay and Karachi will at once be subjected to air raids. It is, time, therefore, that members of the medical profession took immediate stock of all possibilities. Unless they are conversant with available means of protection, no effective medical aid could be rendered to the injured. It is also important that first aid stations should have some effective protection against air raids. Apart from war wounds there are two other types of casualty which require consideration. Of these the gas peril was previously referred to but we would here point out that the danger of the incendiary bomb is no less serious. The A. R. P. Handbook No. 9, "Incendiary Bombs and Fire Precautions"[4] gives all pertinent information. The pattern most likely to be used in a raid by enemy aircraft, on account of its general effectiveness, is the Kilo magnesium electron bomb, weighing only about two pounds. It will penetrate any ordinary roof but is likely to be caught in an upper story, setting fire to the house. The handbook recommends that easy access to attics and roof spaces must be provided and the amount of inflammable material stored in them should be strictly limited. Medical authorities should give careful attention to the problem of fire in large hospitals; inflammatory materials such as spirituous medicines, ether, and X-ray films must necessarily be stored in fire-proof chambers.

The problem is a vast one; we have touched only the fringe, but the seriousness and urgency of the problem require immediate measures if the lives of the civilian population of the large cities are to be preserved. Organisation of medical aid with due regard to the unprotected position of our cities is urgently called for.

3. *The Manchester Guardian Weekly*, Friday, 28th April, 1939.

4. *A. R. P. Handbook*, No. 9, 'Incidiary Bombs and Fire Precautions.'

CURRENT MEDICAL LITERATURE

MEDICINE

Clinical Study Of Angina Pectoris

Semeran-Siemianowski and Rasolt (*Journal of American Medical Association*, March, 18, 1939, page 1092) from an analysis of 536 cases (518 private and 18 admitted to the St. Lazarus Hospital in Warsaw) of angina pectoris seen during the years 1925-1933, give the following classifications and clinical features of angina pectoris, *viz.*

I. Organic (78·7 per cent. cases)—(1) acute form 7·7 per cent.)—cardiac infarction, (2) chronic form —(a) coronalgia (52·7 per cent.)—attributed to diffuse changes in the main coronary arteries and occurring with the clinical picture of angina of effort, (b) myocardialgia (6·8 per cent.)—attributed to diffuse changes in the minute coronary arteries followed by small necrotic foci in myocardium and characterized by slight attacks of pain occurring at rest and by co-existing signs of heart failure, (c) aortalgia (11·5 per cent.)—due to pathologic changes in the aorta.

II. Functional (21·3 per cent.)—(1) neurotic variety (11·5 per cent.), (2) reflex angina pectoris (4·7 per cent.)—from flatulence and gall bladder disease, (3) toxic angina (2·3 per cent.)—produced by nicotine, caffeine or such endogenic factors as gout and endocrine disorders, (4) anæmic angina pectoris (2·8 per cent.)—caused by myocardial ischæmia without any coronary disease. Angina pectoris begins commonly in the fifth and sixth decades and decreases in the later decades. Women were affected only in 12·5 per cent. cases. The majority of the subjects were well-to-do and intelligent; heredity is an important factor and syphilis is held to be the cause in from 4th to 5th of all cases. The average time of survival was 8 years. In 83 per cent. the pain was located behind the sternum; most commonly it was felt transversely and in rare instances longitudinally, in 12·1 per cent of the cases the pain was located far from the precordial region; the pain was accompanied by anxiety in 37·5 per cent. cases. Anginal attack was provoked by physical effort in 68 per cent. by emotional disturbances in 37 per cent. and by heavy meals in 20 per cent. of the cases. Normal systolic arterial pressure was found in 31·9 per cent; it was lowered in 17·1 per cent. and elevated in 51·4 per cent.; average systolic pressure for men was 161 and for women 183 and the average diastolic 99·1 m.m. of Hg. X-ray examination revealed structural defect in the aorta in 36 per cent. There was evidence of sclerosis of peripheral arteries in 60 per cent.; intermittent claudication co-existed in 2·8 per cent. of the cases (this occurred mostly in tobacco smokers).

Heart In Anæmia

McRobert and Reddy (*Indian Medical Gazette*, February, 1939, page 75) write that in treating a case of damaged heart one must not only take into account the condition of the myocardium, valves and vessels but also the oxygen carrying power of the blood. The authors report two illustrative cases which showed marked anæmia due to hookworm infection in addition to the greatly dilated heart and which responded nicely to anthelmintic and iron therapy producing a rapid reduction of the heart to the normal size.

Prognosis And Subsequent Development In Acute Rheumatic Pericarditis

Massie and Levine (*Journal of American Medical Association*, April 1, 1939, page 1219) in reporting on the study of 135 patients with acute rheumatic pericarditis (in which follow-up data were available after an average period of seven years) observe that of these 135 patients 110 had arthritis, one had chorea and the remaining had involvement of the heart as the main evidence of rheumatic activity, that 22 patients died of acute infection, 25 died at an average interval of seven years after recovery from the initial infection and 52 are healthy and doing normal work. 36 per cent. of the cases that were followed up had no evidence of organic heart disease and an additional 14 per cent. had only mitral insufficiency; in the remaining cases aortic valvular involvement seemed to be more common than one would expect in an average group of rheumatic patients. Recovery is

often complete even after a desperately severe attack. New involvement of the valves was unknown unless another attack of rheumatic fever intervened. No case of constrictive pericarditis was noted either clinically or by x-ray. Delayed auricular conduction and auricular fibrillation or flutter were rare and the latter when persisting was associated with mitral stenosis. The study emphasises the great importance of injury to the valves of the heart in subsequent prognosis of acute rheumatic infections and the minor role that the cardiac muscle or pericardium plays after recovery from the acute infection.

Prophylactic Use Of Sulphanilamide In Rheumatic Fever

Thomas and France (*John Hopkins Hospital Bulletin*, January, 1939, page 67) give a preliminary report on the study of the use of sulphanilamide in preventing the occurrence of rheumatic recrudescences in susceptible persons by controlling antecedent streptococcal infections. The drug was tried in 30 patients of the cardiac clinic in two successive winters *viz.* from November, 1936 to June, 1937 (15 grains daily in divided doses) and from October, 1937 to June, 1938 (20 grains daily) with regular controls and it is found out that none of the treated patients had a major attack of rheumatic fever but the control group (30 cases) had 5 major attacks. The cases studied are too small to permit conclusions but the results are encouraging and warrant further trial.

Signs Of Pain In Phrenic Nerve In Diseases Of Abdominal Organs

Ron Coroni (*Giornale di clinica Medica, Ref. Current Medical Literature, Journal of American Medical Association*, March 4, 1939, page 888) from an investigation on the presence of pain in the cervical point of the phrenic nerve (right supraclavicular fossa) in 130 patients suffering from any of various diseases of abdominal organs, observes, that this pain may be spontaneous or induced by palpation over the phrenic nerve in the right supraclavicular fossa, that it is present in all cases of the diseases of the organs on the right side of the abdomen, in pericholecystitis and cholecystitis with or without calculi, in appendicitis (acute and chronic, periduodenitis and duodenal ulcer whenever the cystic point is painful and not otherwise, that is is absent in both right and left sides in gastric ulcer, gastric cancer, renal calculi and pyelonephritis. The sign is of diagnostic value in pathological condition of gall bladder and perihepatic peritoneum.

The Use Of Drugs In The Treatment Of Allergic Conditions

Gold (*Journal of American Medical Association*, April 8, 1939, page 1335) at a meeting of the members of Departments of Pharmacology and of Medicine of Cornell University Medical College and the New York Hospital, points out that 8 major abnormalities are encountered in bronchial asthma, *viz.*, (1) spasm of the bronchial muscles, (2) hypersecretion of the glands, (3) capillary dilatation, (4) increased permeability of the capillary wall, (5) œdema of the mucous membrane and possibly also of the muscles of the bronchi and bronchioles in more advanced stages, (6) diminished elasticity of the lungs, (7) emotional unrest, anxiety and nervousness and (8) asphyxia. He further mentions that not all cases present the factors in the same proportions and it has been doubted if some of these factors are even present in some cases. The result is that these factors impair the movement of the air through the pulmonary tree and interfere with the diffusion of gases. The author then mentions the following groups of drugs used in this condition with explanation of the mechanism of their actions *viz.*, (1) sympathomimetic amines like epinephrine, ephedrine, and other related compounds—produce effects by causing relaxation of bronchial muscles and constriction of blood vessels; (2) members of the belladonna group—atropine and stramonium block the parasympathetic, reduce the secretions and relax bronchial muscles; (3) theophylline, caffeine, papaverine and nitrites—act directly on the smooth muscles and cause relaxation; (4) calcium salts—reduce capillary permeability and (5) barbital derivatives, morphine and codeine—act as general depressants.

Baldwin in the same meeting made the following observations:—Asthma is a functional disease, later on definite pathologic states appear such as emphysema, bronchiectasis, pulmonary arterial hypertension and failure of the right side of the heart. Epinephrine has no effect when given by the mouth; subcutaneous injection of 1 in 1,000 solution is effective in small doses (1 c.c doses causes tachycardia and

nervousness); stronger solution (1 in 100) introduced into the trachea with a vaporizer is useful. Ephedrine is potent when given by the mouth in 0·025 to 0·050 gms., may cause nervousness, tachycardia, insomnia and bladder disturbances and hence is better combined with amytal or phenobarbital (0·03 gm.). Atropine—sometimes large doses are necessary which have other drawbacks. Theophylline in ordinary oral doses (0·1 to 0·2 gm.) is not effective; larger doses cause gastro-intestinal irritation; intravenous use is effective, specially in epinephrine-fast cases, Calcium is not of much value. Barbiturates are useful to relieve nervousness. Morphine in small doses may be effective but should not be used for its many drawbacks, *viz.*, (1) it stimulates the parasympathetic (2) depresses the respiratory centre, (3) diminishes the ciliary action of the tracheal and bronchial mucous membrane and (4) produces habit formation. Iodides make the mucus more liquid and helps its expectoration. Various anæsthetics are not much used. Helium—a mixture of 75 per cent. helium and 25 per cent oxygen may be useful specially in severe cases of status asthmaticus but is highly expensive.

For urticaria, angioneurotic œdema, the following measures are to be adopted *viz.*, (1) epinephrine subcutaneuously (2) calcium intravenously and by mouth, (3) acid hydrochlor dilute by mouth (for hypoacidity) and (4) lukewarm baths of sodium bicarbonate or corn starch. Serum sickness is treated with the same principle.

SURGERY

Chyluria Of Filarial Organs

Ray and Rao (*British Journal of Urology*, March, 1939, page 48) from an analysis of 254 cases of chyluria (of which 42 were in-patients) out of 12,368 cases of filarial infection, observe that the incidence of this complication is 2·05 per cent., proportion of male to female being 9 to 1, that it is observed in regions of low endemicity and absent in hyper-endemic areas. Cystoscopy was performed in 24 cases and excretion urography in 16 cases. In 78 per cent. cases night blood was positive for microfilaria and the chylous urine was positive in 52 per cent.

The most striking pathological finding is the enormous dilatation of the regional lymphatic trunks. Pathological changes in the urinary tract which are not constant are discussed in detail. The fat content of the urine varies from trace to 1·1 per cent. and the albumin content varies from nil to 0·6 per cent. Both globulin and albumin are present and fibrin is found more frequently in specimen of urine after midday meal. The blood cholesterol content is high, the average being 0·146.

The onset of chyluria is often spontaneous, in half of the cases there is a history of injury of some form; in females it starts often after parturition; it is extremely rare in children. The periods of remission may be as short as 3 or 4 weeks but may be longer. The patients usually present other gross signs of filarial lesions.

In 75 per cent. of cases the point of leakage is easily seen in the bladder, usually just above the ureteric bar of Mercier (cystoscopy); in 25 per cent. the chyluria is of renal origin and the remaining cases are of mixed type. With the aid of excretion urography usually, communications between renal calices and the dilated perirenal lymphatics are clearly displayed.

In treatment no prophylaxis is of any value; complete rest in bed, elimination of fat in the diet, aperients and elevation of the foot end of the bed may abort an attack, if promptly done. Medical treatment consists of intravenous use of "tryparsamide" 2 to 3 gm. in 10 c.cm. of distilled water. Soamine 2 grs. in 2 c.cm. water given subcutaneously on alternate days (10 injections) may be useful. When the leakage is slight, cystoscopy and fulguration are effective with a preliminary bladder irrigation with 1 in 2,000 silver nitrate solution if clots are present but in severe cases, continuous drainage of the bladder for 24 hours by an indwelling catheter is necessary. Urethral diathermy may be helpful in a small percentage of cases of chyluria of renal origin. An effective lymphatovenous anastomosis has not been a surgical success.

Prognosis to life is not unfavourable and there is no case of fatality in the present series.

Sulphanilamide In The Treatment Of Erysipelas

Nelson and others (*Journal of American Medical Association*, March 18, 1939 page 1044) report on the excellent results obtained in erysipelas with prontosil (by oral and intramuscular routes) in 344 cases admitted to the Bellevue Hospital from January to July,

1937. Of these 344 cases 31 were children under twelve, 219 men and 94 women. There were five deaths amongst the adults (1·5 per cent.) and 4 amongst the children (12·9 per cent.). Complications in adults treated with prontosil were: spread of lesion 3, abscess 5, pustular folliculitis 2, acute infectious arthritis 2, pneumonia 1 and cardiac arrhythmia 1. Results obtained are given in a tabular form and can be compared with that obtained by antitoxin therapy in a previous group of cases.

Treated with Prontosil				Treated with Anti-toxin.	
Adults	Children	Women		Adults	Children
219	31	94	Number of cases treated	382	24
6·9	5·5		Days of hospitalization	11·1	12·8
4·1	2·9	4·4	Days of fever	6·8	10·0
5	4		Deaths	35	9
1·5	12·9		Mortality per cent.	9·2	37·5

Testosterone Propionate In Prostatic Hypertrophy

Bolend (*Southern Medical Journal*, Birmingham, February, 1939, page 154) reports that in 23 unselected cases of enlarged prostate with urinary retention, there were 10 cases clinically well and symptom-free, 7 much improved and 6 with no improvement. In another series of 23 uncomplicated cases of benign prostatic hypertrophy the results were more satisfactory than before. The prostates were found diminished in size by palpation or by cystograms. Sections of prostate of patients treated with varying amounts of the drug revealed (1) an exaggeration of glandular hyperplasia, (2) a reduction or at least no increase in stroma, and (3) a reduction of the inflammatory reaction.

Bronchial Carcinoma

Brock and Cann (*Guy's Hospital Reports*, October, 1938, page 371) report that the symptoms may be relieved and the life prolonged in cases of bronchial carcinoma if they are treated with radon tubes introduced intrabronchially. There may be some cases of cure where the disposition of the larger bronchi enables the radon tubes to be inserted in such a way that the growth is exposed to a wider radiation and crossfire. But the authors maintain that this treatment should not be preferred to surgical treatment in cases which are fit to undergo surgery.

Hydrochloric Acid In Certain Cases Of Atrophy And Delayed Calcification In Fractured Bones

Cornell and others (*Journal of Bone and Joint Surgery*, January, 1939, page 40) report that they noted gastric hypoacidity in 8 cases where bone atrophy and decalcification were observed at the seat of fracture and that the use of hydrochloric acid and a diet rich in vitamins and calcium helped the calcification of the bones and the formation of callus.

Skeletal Metastasis In Cancer

Geschickter and Maseritz (*The Journal of Bone and Joint Surgery* April, 1939, page 314) give in the following lines the summary of their observations, *viz.*,

(1) Skeletal metastasis of bone resulting from a carcinoma may occur without any clinical evidence of a primary lesion.

(2) The prostate is the most common source of skeletal metastasis; the breast, second, the kidney, third, while the stomach, lung, thyroid and other organs are involved less frequently and in the order given.

(3) The size of the primary lesion is no index of the probablity of metastasis.

(4) Metastasis to bone may occur many years following the primary operation and in the present series of breast cancer skeletal metastasis was observed as late as eighteen and twenty-five hundredths years (18·25 years) post-operatively.

(5) Irradiation of osseous lesions relieves pains and prolongs the life of the patient.

SYPHILIS AND DERMATOLOGY

M. & B. 693 In The Treatment Of Gonorrhœa

Bowie and others (*British Medical Journal*, April 8, 1939, page 711) report excellent results obtained by M. & B. 693 in gonorrhœa. 127 were treated

but 30 ceased to attend or were transferred to other centres before final tests of cure were carried out. Of these 97 cases treated, 91 passed all tests of cure (93% success) and there were only 6 failures. Toxic reactions met were of minor type and subsided rapidly on withdrawal of drugs. The authors point out that the treatment should be begun at the earliest possible moment. If there is no response in a week it is better to try other forms of treatment than persist in the treatment with sulphanilamide group of drugs. In the opinion of the authors M. & B. 693 has proved the most effective therapeutic agent yet introduced in the treatment of gonorrhœa.

Treatment Of Gonorrhœal And Rheumatoid Arthritis With Sulphanilamide

Colggeshall and Bauer (*New England Journal of Medicine*, January, 1939, page 85) report successful results with sulphanilamide (in doses sufficient to maintain blood sulphanilamide level of 10 mg. per 100 c.cm. or higher for seven days) in gonorrhœal arthritis but not in rheumatoid arthritis.

Ophthalmia Neonatorum Treated With Uleron

De Wet (*South African Medical Journal*, February 11, 1939, page 98) reports a case of gonorrhœal ophthalmia who had the standard treatment for 3 weeks without much effect but responded dramatically to uleron given in 0·125 gm. doses thrice daily. The conjunctivitis cleared up on the third day and the discharges soon stopped.

Thiamin Chloride In Tabetic Pains

Metildi (*American Journal of Syphilis, Gonorrhœa and Venereal Disease*, January, 1939, page 1) reports on the beneficial effect obtained by the use of thiamin intramuscularly or intravenously in the treatment of lightning pains of six cases of tabes dorsalis where the standard anti-syphilitic treatment failed. The pains were relieved completely or in part in a few days after the injection which is given in 10 mg. doses and continued at weekly intervals. The period of observation is too short to permit any evaluation of the results thus obtained but the results are highly encouraging and warrant further trial of the drug.

PEDIATRICS

The Present Position Of Tonsil Operations

Yearsley (*British Journal of Children's Diseases*, January-March, 1939, page 1) reviews the literature on the subject and points out that before the tonsils are removed one must be sure that the enlargement is not physiological or immunological, one must watch and see the evolution of such an enlargement under conservative treatment and one must also be sure that the air-way is not obstructive and the nasal drainage is sufficient. The examination of the nose, sinuses and the nasopharynx and the exclusion of any defect in these parts is an essential preliminary to the operation of the tonsils. The author opines that the pharyngeal lymphoid tissue really requires operation more often than the tonsils. He mentions the following as most common and important indications for removing the tonsils *viz.*, (1) when they are large, hard and definitely obstructing the fauces; (2) when they are undoubtedly septic and too extensively so for other treatment and (3) when they are accompanied with cervical adenitis. He concludes by observing that "under the present circumstances it may be considered that tonsillectomy appears to be too often done in children without adequate reason and too infrequently performed in adults. The present urgent need is for discrimination and moderation."

Extrasystoles In Children

Lyon and Rauch (*American Journal of Diseases of Children*, February, 1939, page 278) report that the incidence of extrasystoles is 2·2 per cent. in children with normal hearts and 4·3 per cent. in children with cardiac lesions. No evident cause of the extrasystole could be determined except in certain cases where rheumatic fever, diphtheria, congenital heart disease and nervous instability seemed to be predisposing factors. 22 children were examined electrocardiographically and in these the origin of extrasystole was ventricular in 16, nodal in 3, auricular in 3 and in only 1 patient it was multifocal. The authors further point that extrasystoles per se do not cause an impairment of cardiac function or retard the children's growth and development.

Yeast For Premature Infants

Litchfield and others (*American Journal of Diseases of Children*, March, 1939, page 546) in re-

porting on the study of the effect of administration of yeast on growth and development of 54 premature infants observe that infants receiving yeast extract showed gains in weight much sooner than those not receiving it. There was no evidence of gastro-intestinal disturbances in the treated patients.

Some Disorders Of The New-Born

Braid (*Medical Press and Circular*, March 29, 1939, page 321) deals with the subject under the following heads, *viz.*,

(1) Pyrexia—it may occur about the third or fourth day in the baby who has not been given sufficient amount of fluid. Administration of water will suffice with sugar if acetone is present. Irregular temperature appearing at the end of the first week is commonly due to urinary infection by B. coli. Refusal to take food, vomiting and diarrhœa may be present. Pot. citras grs.iii 3 hourly for 48 hours and then 4 hourly until the temperature is normal for a week and free administration of fluid will usually cure the disease.

(2) Jaundice—physiological jaundice appears on the 3rd or 4th day and lasts for a few days only; to be distinguished from (a) familial icterus gravis, (b) icterus gravis due to infection and (c) icterus gravis due to congenital obliteration of the bile duct. Familial jaundice:—jaundice at birth or 24 to 36 hours after, becomes rapidly deeper and the child becomes drowsy and refuses food; stool may be of normal color or completely colorless: the van den Burgh direct reaction is positive and also the indirect one: severe anæmia with increased reticulocytes. 10 c.c. of blood intramuscularly once or twice daily until jaundice ceases to increase; campolon 1/2 to 1 c.c. on alternate days for 4 days and iron therapy to combat anæmia are some of the measures to be adopted. In icterus gravis due to infection jaundice appears late. In congenital obliteration of the bile duct jaundice may be present at birth; the van den Burgh test gives a positive direct action only: no anæmia: operative treatment is suggested.

(3) Convulsions—main causes are (a) cerebral trauma, (b) cerebral agenesis and (c) meningitis. Diagnosis is helped by the exact obstetric history and the time of onset of any of the associated signs, *e.g.*, rise in temperature, vomiting. In cerebral trauma a convulsion may be the first sign of the trouble or may be preceded by such sign as rhythmic protrusion of the tongue, vomiting, irregular respiration. The convulsions soon become generalised and end in a characteristic shrill cry; head may or may not be retracted; temperature may or may not be raised. Treatment is expectant; the patient should be kept quiet in his cot, protected from light and noise. For restlessness chloral hydrate gr. 1/2 to 1 three or four hourly or calcium bromide in similar doses are useful. Lumbar puncture is better avoided. Moncrieff recommends 10 per cent. saline per rectum at 6 hourly interval for 24-48 hours, specially in those cases where the temperature is high or vomiting persisting or tension in the anterior fontanelle is high. Cerebral agenesis—obstetric history is negative, clinical feature similar, the circumference of the head of the child is less than normal 13½ inches; signs of mental deficiency and or spastic paralysis will appear. Meningitis is rare but if it does occur it may be due to B.coli, streptococcus etc. Lumbar puncture should be done. It is rapidly fatal.

Sulphanilamide In Measles

Anderson (*British Medical Journal*, April 8, 1939, page 716) reports on the results obtained by sulphanilamide in 125 cases of measles. The cases were considered under two groups, one being treated with sulphanilamide and the other serving as control. The result is that sulphanilamide is of some value in shortening the duration of broncho-pneumonia and with the possible exception of otitis media it has no effect on the course of other complications of measles.

ACTION OF QUININE AND THE SYNTHETIC DRUGS ON MALARIA

	Action on Trophozoites		Action on Gametocytes		Action on Acute Symptoms		Action on Frequency of Relapse.	Action on Splenomegaly.	Effect on general condition of Patient.
	B.T.+Q.	M.T.	B.T.+Q.	M.T.	B.T.+Q.	M.T.			
Quinine	Daily doses of 1 gm. (15 grs.) causes disappearance, 5·7 days.	Daily doses of 1·3 gm. (20 grs.) causes disappearance, 5-7 days.	Affects pregametocytes and gametocytes.	Affects pregametocytes but gametocytes only very slightly.	Marked action from 3rd day (2nd paroxysm).	Variable action from 3rd or 4th paroxysm.	Acts on all species but in B.T. and Q. release rate may reach 50 per cent.	Acts on all species but effect is transient where reinfection or relapses are frequent.	No effect if treatment is limited to number of days essential.
Atebrin	Daily doses of 0·3 gm. causes disappearance after 3 days. Effects last longer than quinine.	Daily doses of 0·3 gm. causes disappearance after 4 days in 90 per cent. of cases.	Similar to quinine but slightly more marked.	Similar to quinine.	Very marked action. Fever falls by 2nd paroxysm.	Marked action. Fever usually falls by 3rd paroxysm (but with some strains effect is less than quinine.	Action slightly more than quinine especially in B.T. and certain strains of M.T.	Effect somewhat slower than quinine but seems to last longer.	Sometimes yellow coloration of skin.
Plasmo quine	Slight action only.	Practically no action.	Definite action in both species.	Marked action in minimum doses of 0·02 gm.	No indications for using plasmoquine alone for treatment of acute attack.	No indications for using plasmoquine alone for treatment of acute attack.		Insufficient data.	In the doses now used (*e.g.*, 0·02 gm.) it seems to have no depressing effect.

Action of Combinations of Drugs.—(1) There is no advantage in combining quinine atebrin in treatment.

(2) Quinine + plasmoquine simultaneously produce less frequent and less intense toxic symptoms than atebrin *plus* plasmoquine, but are best given consecutively where possible. Quinine (15-20 grains daily, 7 days) *plus* plasmoquine (0·02 gm. daily, 5 days*) are probably the best treatment for B.T. and Q. malaria.

(3) Simultaneous administration of atebrin and plasmoquine aggravates the toxicity of each and is not recommended. Consecutive treatment with atebrin (0·30 gm. daily, 5-7 days) and plasmoquine (0·02 gm. daily, 5 days*) has no advantage in the primary attack, but acts on gameotocytes and relapses in the same manner as quinine and plasmoquine treatment.

Practical Suggestions for Treatment.—(1) Individual Treatment. Quinine (15-20 grains) or atebrin (0·3 gm.) 5-7 days, followed by plasmoquine (0·02 gm.) 5 days, or quinine *plus* plasmoquine simultaneously.

(2) Treatment in Field. Quinine (15-20 grains) or atebrin (0·3 gm.) 5-7 days, followed by plasmoquine (0·02 gm.) 5 days if funds and medical supervision are available. But if, as is usual, this is not so, short treatments with the cinchona alkaloids are more suitable.

(3) Mass Drug Prophylaxis. Daily doses of quinine (0·40 gm. or 6 grains), or biweekly doses of atebrin (0·20 gm.).

*For gametocidal purposes alone, however, one dose of 0·02 gm. plasmoquine followed by a second dose, if necessary, on the 5th day is equally effective. It may be noted also that in one mass treatment experiment (in Sardinia), the daily administration of 0·02 gm. plasmoquine had to be stopped after 3 days on account of toxic symptoms.

Extracted from the 4th General Report of League of Nations, Malaria Commission and issued by the Malaria Institute of India.

ULERON IN THE TREATMENT OF GONORRHŒA

The authors have reviewed the extensive literature on the subject giving briefly the conclusions of various German and English workers. All the German observers are enthusiastic about the efficacy of Uleron in gonorrhœa acute and chronic, and of its superiority over prontosil and other sulphanilamide group of drugs. Some of them recommend uleron only for subacute and chronic cases. Ripely Oddie (1938) writes that opinion in Germany is divided, "the balance numerically is in favour of immediate as opposed to delayed treatment". English workers have found that uleron has the least toxic effect but they disagree with the German observers who claim for it better end-results and superior mode of action, prontosil being found more effective in acute cases in their hands than uleron.

From the observation made by various workers it would appear that the following dose and scheme of treatment give the best result consistent with safety. 3 grammes of uleron per day in 3 equally divided doses for 3 to 4 days are given, preferably after a meal, followed by a draught of alkaline water. This course of uleron treatment should be repeated after an interval of 6 to 8 days and not more than 3 such courses are necessary for any case. In the interval between a course of treatment the Janet irrigation with 1 in 1000 solution of potassium permanganate in the male and only vaginal douche in the female in addition to specific vaccine therapy should be tried. The authors also found this scheme of treatment successful in his own series.

Toxic reactions met with in course of treatment with uleron are mild and are few in number. Special mention is made of a form of symmetrical toxic peripheral neuritis mainly affecting the calf muscles. producing acute stiffening, pain and disability occurring in the course of uleron treatment. Uleron, unlike prontosil, seldom causes hæmolytic anæmia sulphæmoglobinæmia and agranulocytosis.

The authors tried uleron in 55 cases of gonorrhœa and its complications in both sexes and in all stages with complete success in 32, partial success in 11 and poor results in 12 cases. The number of cases treated are small but the results are encouraging and warrant further trial and observation. The following is the summary of their observations:—

1. Subacute and chronic cases respond with better results than acute cases.

2. Complications such as acute arthritis, epididymitis, conjunctivitis, etc., react very well to uleron.

3. The drug appears to be safe when given intermittently and in doses used by the writers in their later cases.

4. In cases of gonorrhœa in women, acute and chronic, including vulvo-vaginitis in children, the results do not seem to be as encouraging as in males.

5. In spite of an apparent immediate good result, every case should have three courses: every case should also have three courses before considering it a failure.

*Being the summary of a paper by Dr. V. Govindan Nair, M.R.C.P., F.R.F.P.S. and Dr. V. V. Chetty, M.B., B.S. of King George Hospital, Vizagapatam read at the Indian Science Congress held at Lahore, January, 1939.

ASSOCIATION NOTES

Minutes or proceedings of Branches and Affiliated Societies intended for publication should be sent to the General Secretary of the I. M. A., Samavaya Mansions, Calcutta—EDITOR.

BENGAL PROVINCIAL BRANCH

Proceedings of a meeting of the Bengal Provincial Council of the I. M. A. held on Tuesday, the 21st March, 1939, at 7-30 p.m. at the Association Hall at 67, Dharamtala Street, Calcutta.

Members present:—Dr. Subodh Datta (in the chair), Drs. Jibananda Mukherji (Howrah), Suren Sen (Faridpur), Mohini Mohan Chatterjee (Hooghly), B. K. Ghosh (Barrackpore), B. N. Ghosh (Calcutta), J. C. Banerjea (Calcutta), B. P. Tribedi (Calcutta), S. K. Bose (Calcutta), P. C. Roy (Calcutta), K. K. Sen Gupta (Calcutta), J. K. Majumdar (Calcutta), B. Banerjea (Calcutta) and P. K. Guha (Calcutta).

1. The proceedings of the last two meetings were read and confirmed.

2. The statement of accounts for the month of February, 1939, was inspected.

3. The letter dated 8-3-39 from Major P. Bardhan, Calcutta, in connection with the recent appointment of a private British Medical Practitioner as the Surgeon Superintendent and Secretary to the Mayo Hospital, Calcutta, in the place of the retiring I.M.S. Officer, was placed before the meeting.

Resolved that this Bengal Provincial Council of the Indian Medical Association records its most emphatic protest over the recent appointment of a British medical practitioner as the Surgeon Superintendent and Secretary to the Mayo Hospital in preference to equally qualified Indian candidates, and severly condemns the action of the Board of Governors of the Hospital.

Resolved further that a copy of the above resolution be forwarded to (i) the Minister in charge of Public Health and Local Self Government of the Government of Bengal, (ii) the Surgeon General with the Government of Bengal, (iii) the Governing Body of the Mayo Hospital, and (iv) to the Associated Press.

Further resolved that a copy of the above resolution be forwarded to Major P. Bardhan for his information.

4. The letter dated 9-3-39 from the Hony. Secretary, Khulna Branch of the I. M. A., in connection with a Medical Certificate ignored by the Postal authorities of Khulna, was placed before the meeting.

Resolved that a copy of the letter be forwarded to the Registrar, Bengal Council of Medical Registration and also to the Postmaster General, Bengal and Assam Circle, requesting them to investigate into the matter and let this Council know the circumstances which led to the non-recognition of the medical certificate granted to Krishna Gopal Pal, a Postal employee of Khulna, by Dr. Satish Chandra Ghosh, M.B. of Khulna, a registered medical practitioner.

Further resolved that a copy of the above resolution be forwarded to the Secretary, Khulna Branch.

5. The letter dated 12-2-39 from the Secretary, Dacca Branch, was considered.

Resolved that in view of the financial embarrassments experienced by Dacca Branch, the amount of contribution due to this Provincial Branch for the year 1937-38 be remitted and the Central Council be requested to remit its share of contribution for the same period.

Further resolved that this Provincial Council regrets its inability to render any financial help to the said branch for want of funds at the present time and the Dacca Branch be requested not to close the branch but to revive it by pooling all possible resources. This Provincial Council will be glad to render financial aid at a future date if funds permit.

6. The letter dated 22-2-39 from Dr. P. K. Guha, Calcutta, resigning his office of the Asst. Secretary of the B. P. Branch, was placed before

the meeting. Resolved that Dr. Guha be requested to withdraw his resignation and to continue his office.

7(a). The letter dated 17-3-39 from the Calcutta Branch regarding the payment of Central Fund Contribution on behalf of that branch was considered. Resolved that the required quota for the Calcutta Branch to the Central Fund for the year 1937-38 be forwarded to the Central Office less Rs. 210/-, the amount due to the Calcutta Branch from the members who have left that branch without clearing their dues and have joined the newly formed branches in Calcutta and Rs. 15/-, the amount being the share of telephone and electric charges payable by the Central Office to Calcutta Branch for the month of March, 1938.

(b) The following panel was formed to represent the Bengal Provincial Council of the I. M. A. in the deputation that will wait upon the Hon'ble Finance Minister and the Hon'ble Minister in charge of the Medical portfolio of the Government of Bengal, in connection with the pending Bengal Finance Bill, 1939:—

1. Dr. N. R. Sen Gupta (Calcutta)

2. Capt. J. C. Dey (Chinsura)

or to meet the exigencies of time and circumstances one of the Secretaries.

With a vote of thanks to the chair, the meeting came to a close.

A. D. MUKHARJI, *Chairman.* K. K. SEN GUPTA, *Jt. Hony. Secretary.*

U. P. PROVINCIAL BRANCH

Proceedings of a special meeting of the Provincial Council held on Sunday, the 30th April, 1939, at 6-30 p.m. in the Garvie Medical Library rooms, Town Hall, Meerut.

Members present:—Dr. Bhupal Singh, Vice-President in the chair; Drs. L. K. Ray, Meerut; S. B. Vyas, Meerut; Major-General D. P. Goil, Meerut; Drs. S. Halder, Muzaffarnagar; R. C. Chaurasia,, Meerut; R. C. Mitter, Meerut and R. N. Bose, Meerut.

1. Resolved that this Provincial Council expresses its deep sense of sorrow at the sudden and untimely demise of its President, Rai Saheb Dr. Suraj Mal Sarin of Dholpur and conveys its heartfelt condolence to the members of the bereaved family.

Passed all standing.

2. Resolved further that a copy of the above resolution be sent to the bereaved family.

3. Question of election of a President for the remaining part of the year was considered.

(i) General Goil proposed:

That no new President be appointed, but that the memory of our departed President be honoured by the office being vacant for the remaining portion of the year, the Headquarters Vice-President to carry out the duties of the President when occasion should demand this being done.

Seconded by Dr. R. C. Chaurasia.

On votes being taken, 3 voted for and 3 against and the proposal was dropped by the casting vote of the Chairman.

(ii) Dr. Mitter proposed that a new President be elected.

Seconded by Dr. Vyas. Motion was unanimously carried.

4. Dr. Mitter proposed and Dr. L. K. Ray seconded that:

Dr. Murari Lal, L.M.P., of Agra, be elected President for the remaining part of the year.

Motion was carried unanimously.

With a vote of thanks to the chair, the meeting dispersed.

BHUPAL SINGH, *(Vice-President) Chairman.* R. N. BOSE, *Hony. Secretary.*

BUDAUN BRANCH

The following resolution was passed at a meeting held at the Civil Surgeon's Office, Budaun, on the 15th April, 1939:

Resolved that this branch of I. M. A. expresses its profound sorrow at the sad and untimely demise of R. S. Suraj Mal Sarin, President of our Provincial Branch, and tenders its heartfelt condolence to the

members of the deceased's family in their bereavement and pray that the departed soul may rest in peace.

O. P. MATHUR,
Secretary.

DEORIA MEDICAL ASSOCIATION

The following resolution was passed at the monthly meeting held on 8th April, 1939.

The Deoria Medical Association strongly supports Dr. Kunj Behary Lal Varma, Secretary to the Provincial Branch of the All-India Medical Licentiates' Association, with regard to his recent memorandum to the U. P. Government, which contains the following proposals. Further it urges upon the Government and the authorities of the Indian Medical Association to give their best consideration:

" The Agra Medical School must be raised after the model of the Royal College of Surgeons of England so that in due course of time the school may develop higher post-graduate courses like M.R.C.P. and F.R.C.P. for its alumni which could also be opened to medical graduates as in England.

"Regarding the reorganisation of U. P. Medical Council and amendment of the U. P. Medical Act, the memorandum states that the first and important reform in this connection is to amend the U. P. Medical Act on national and democratic lines. Joint electorate must be the first step towards the democracy of Medical Swarajya in the province. A common register for all registered practitioners is the urgent need of the profession. All names should be arranged alphabetically with their degrees or licenses or diplomas as suffix against each name. Regarding standard of medical education, inspection of teaching institutions, medical ethics and reciprocity, the Act should be so amended as to bring about these much desired changes.

"For practising licentiates desirous of obtaining M.B., B.S. degree of the Lucknow University, the following schemes through the institution of a "Medical Practitioner Degree Examination " by the University has been suggested:

(a) Exemption from preliminary examination of the F.Sc. with Biology.

(b) Licentiates under ten years' practice should receive two years' post-graduate training at the Lucknow Medical College before degree examination.

(c) Licentiates over ten years' practice should receive one year's post-graduate training.

(d) Licentiates over twenty years' practice should be required to submit a thesis which, if approved by the examiners, would qualify to confer the degree."

S. N. MUKHERJEE,
Hony. Secretary.

ROORKEE BRANCH

The sixth meeting of Roorkee Branch of I. M. A. was held in the Indian Military Hospital under the presidentship of Lt.-Col. G. B. Hanna, I.M.S., O.B.E., Civil Surgeon, Roorkee, on 18th February, 1939, at 4-30 p.m.

Members present—Lt.-Col. G. B. Hanna, I.M.S., Capt. J. Revans, I.M.S., Capt. T. Denness, I.M.S., Dr. K. N. H. Rizvi, Dr. R. C. Srivastava, Dr. Abdul Majid, Dr. Shambhu Nath, Dr. J. G. Pereira, Dr. B. D. Garg and Dr. C. G. Cox.

The minutes of the last meeting were duly read by the Secretary and confirmed.

After that Capt. T. Denness, I.M.S., delivered a very interesting and exhaustive lecture on "Sulphonamides". He traced their history that they were introduced in 1932 and issued in 1936. They consisted of benzene amine and sulphonoxyl groups. T693 had a pyridine group in addition. They were shown to exert specific action on strepto, pneumo and meningococci and to a certain extent on B. coli. Staphylococci have defied all actions. Amongst the different products put up T693 is the most toxic and specific for pneumococci, proseptacine the least toxic and specific for gonococci and septanilam is intermediate in toxicity. Uleron claimed to be a specific for gonorrhœa may cause peripheral neuritis if used in excess. They should be begun when the body has got a little immunity—in some cases an injection of auto-vaccine may be necessary. To begin with 12 gms. or 24 tablets may be pushed during the first 24 hours and then the doses are gradually cut down: in smaller doses the blood becomes sulphonamides-fast. Everything containing sulphur should be avoided, *e.g.*, MgSO4 and onions. All the members took part in the discussion.

Two clinical cases were demonstrated, one was of adenitis and the other was of idiocy by Dr. Abdul Majid and Dr. B. D. Garg respectively.

The President in the end thanked Capt. Denness for his efficient lecture and suggested that in future all the members should take part and have discussions on subjects of daily use rather than one member should read a paper.

With a vote of thanks to the chair the meeting came to a close.

R. C. SRIVASTAVA,
Secretary.

GHAZIABAD BRANCH

A meeting of the Indian Medical Association, Ghaziabad Branch, was held on the 11th April, 1939, at 2 p.m. at the residence of Dr. Balwant Rai. Dr. N. N. Chakravarti presided.

Drs. Balwant Rai, A. L. Johri, Mrs. E. G. Charles and M. L. Garg were present.

The following office-bearers were elected:

Secretary—Dr. M. L. Garg.

Joint Secretary—Dr. Balwant Rai.

Representative to Central Council—Dr. Rajeshwar Sing.

Representative to Provincial Council—Dr. M. L. Garg.

The Secretary read the Annual Report.

Resolved that the practice of closing the dispensaries in the afternoon and on Sunday should be discontinued and should work as before.

Dr. Chakravarti read a paper on Diabetic Coma.

The meeting terminated at 3 p.m. with a vote of thanks to the chair.

M. L. GARG,
Secretary.

JHANSI MEDICAL ASSOCIATION

At the annual meeting held on Saturday, October 8, 1939, the following office-bearers were elected for 1938-39:

President—Capt. J. F. DeSouza, L.M.S.

Vice-Presidents—Dr. Sarju Pershad, L.M.P., Dr. R. B. Mathur, M.B., B.S., D.P.H. (since transferred).

Treasurer—Dr. A. Choudhuri, M.B.

Secretary—Capt. H. N. Shivapuri, M.B., B.S., I.M.S. (Retd.).

Jt. Secretary—Dr. F. L. Jain, M.S.M.F., L.O. (since transferred).

Members of the Executive Committee—Drs. V. G. Dube, L.C.P.S., M. L. Mehra, M.B., B.S. and Y. B. Mate, L.C.P.S.

Representative on Central and Provincial Councils—Capt. H. N. Shivapuri, M.B., B.S., I.M.S. (Retd.).

Auditor—Dr. C. Bhargava, L.S.M.F. (since transferred).

The total number of members on the strength of this Branch on 31-3-39 was 33, of which 3 were transferred leaving 30 members—25 local and 5 mofussil members. Since then one has joined making 26 local members and a total of 31 members. The detailed information is submitted separately.

The branch has been unfortunate in that our President has been more or less seriously ill for last several months and the Vice-president Dr. Sarju Pershad has also been an invalid. The other Vice-president Dr. Mathur has now been transferred from Jhansi to Meerut.

The branch held 7 meetings during the six months under report, of which one was adjourned for want of quorum.

Two of the meetings were Farewell functions to bid farewell to Drs. F. L. Jain and A. D. Soares on their departure from this station. But I am glad to say that Dr. F. L. Jain, though transferred from Jhansi, yet continues on our roll as a mofussil member of this branch. One was a clinical meeting with a cinema show arranged for the benefit of our members by Dr. A. Monseiro on behalf of Messrs. Bayer's Remedies, Bombay, to whom our thanks are due for this.

One of our meetings held on 4-12-38 was graced by the presence of the All-India President, Dr. George DaSilva.

The National Health Insurance Bill was considered in detail and several useful amendments were submitted to the headquarters.

The branch also considered the question of changes in rules and strongly protested against

frequent changes. This branch is definitely of opinion, that no violent changes are required and that rules should not be changed frequently.

The branch also raised the question of influx of German doctors and at the instance of this branch, the matter was raised in the All-India Medical Conference at Meerut and a suitable resolution was adopted.

This branch also considered the modifications to the U. P. Excise Rules regarding drugs containing rectified spirit. This question was taken up with U. P. Government and a suitable solution is in sight.

There are no facilities for training compounders in U. P. except for State or aided hospitals. This question has now been taken up by this branch and is being put up to the local Government. I hope some suitable solution will be found to this problem also.

This branch was represented both at the 5th U. P. Provincial Conference held at Agra in October, 1938, and at the 15th All-India Medical Conference held at Meerut in December, 1938, by Captain H. N. Shivapuri, the Secretary. Several resolutions were moved by him at both places and many suggestions of this branch were adopted.

Capt. H. N. Shivapuri was re-elected at the annual meeting at Agra as Provincial Joint Secretary of the U. P. Provincial Branch for the third year in succession.

Dr. V. G. Dube, L.C.P.S., has been elected as Vice-President of this branch in place of Dr. R. B. Mathur transferred and Dr. V. Fonseca, M.B., B.S., has been elected Auditor in place of Dr. C. Bhargava resigned.

This branch has, as usual, already paid the full contribution on behalf of all members on the strength of this branch for the financial year 1938-39, through our Provincial Headquarters at Meerut. We are proud to say that we are always among the first to do so and this branch has never been in arrears.

H. N. SHIVAPURI,
Secretary.

JUBBULPORE MEDICAL ASSOCIATION

Jubbulpore Medical Association places in record its deep sense of sorrow at the sudden death of Rai Bahadur Dr. L. P. Choudhury who was an ex-President of this Association.

We extend our heart-felt sympathies to the members of the bereaved family.

G. G. SUBHEDAR,
Secretary.

NELLORE DISTRICT MEDICAL ASSOCIATION

SECRETARIES' REPORT

We have great pleasure in presenting to you the report of the Nellore District Medical Association for the year 1938-1939.

Origin: Started on 4th December, 1932, the Association is now passing the seventh year of its useful existence. Thanks to the ungrudging co-operation of the members and to the fostering care and help of others bestowed on this infant Association, it has developed into what it is to-day. It will be realised by all members that this period, *i.e.*, the stage between infanthood and adolescence is a period which requires a good deal of attention and nourishment. The Association has supplied a longfelt need and the very fact that several members of the medical profession in the district have joined it, bears ample proof to the untiring efforts of the organisers. And it is hoped that the members will evince more and more zeal in the working of the Association and see that it grows into an adult without any difficulty.

It is a pleasure to announce that this year we have got the highest number of members on our rolls. It only shows that the usefulness of the Association is being appreciated more and more by the members. In these days of rapid advancement in medicine and surgery, it is not possible for everybody to be in touch with the progress unless they are members of such an Association where they can meet periodically and discuss.

Aims and Objects: The object of the Association is to hold as many meetings as possible to enable the members to come together and benefit by the new experiences of each other, to organise lectures by the distinguished members of the profession, to subscribe for valuable medical journals to be circulated among the members, to hold demonstrations of interesting cases and do whatever else is

possible and necessary to equip the members of the profession to discharge their duties with credit and success and to maintain the dignity and position of the profession in tact. More than everything else, the Association hopes to develop a brotherly feeling and *esprit-de-corps* among the members of the profession so that they might work harmoniously with good feeling to each other and not in a dissipated and disorganised manner.

Constitution: The Association is managed by a President, a Vice-President, two Secretaries and three members forming the Executive Committee. The office-bearers are elected every year by the general body. Every registered medical practitioner in the district is eligible to be a member of the Association on payment of an annual subscription of Rs. 5.

Members: The total strength of the members this year is 42. all of whom have paid the subscription as against 12 in the previous year.

We take this opportunity of making an appeal to such of our brethren who have not yet joined us in this Association to become members as early as possible so that we may have the pleasure of their company and the benefit of their learning and experiences and they too might benefit by us if we can afford them any. With their help and co-operation, we are sure the Association will be able to turn out more useful work.

Office-bearers for the year 1938-39—Dr. R. Ganapathi Aiyar, L.M.S., *President;* Dr. L. A. Benjamin, M.D. *Vice-President;* Dr. P. Udayachala Rau, L.M.S.S.A. (Lond.); (from 1-4-38 to 12-8-38), Dr. Muhammad Abdul Latif Khan Saheb Bahadur. M.B.B.S. (from 13-8-38 up to date) and Dr. S. Raghunath Singh, L.M.P., *Jt. Secretaries.*

Members of the Executive Committee—Dr. A. Ananthanarayana, M.B.B.S., Dr. M. Srinivasa Rau, L.M.P. and Dr. N. Murthi Sarma, L.M.P.

Meetings: Six meetings were held this year during which interesting and instructive lectures were delivered and papers read on subjects of importance and demonstrations of interesting cases were given. It is gratifying to note that the attendance of members at these meetings was more satisfactory than in the previous years and it is hoped that the same interest and zeal will be evinced in the future also. Several of those who attended the meetings were from mofussil and we appeal to the members residing in Nellore to take a keener interest in the activities of the Association.

Lectures, etc.: (1) A talkie film on Syphilis and Blood in the Vinayaka Cinema Hall, Nellore, by Bayer's Remedies Limited, Madras. (2) A lecture on Syphilis and its modern treatment in the Headquarters Hospital by Dr. Ananthanarayana, M.B.B.S. (3) A paper on Calcium Therapy by Dr. J. Prakasa Rau, M.B.B.S. (4) Demonstration of an interesting case of Skin disease in the Government Headquarters Hospital, Nellore. (5) A paper on Beri Beri and its treatment by Dr. S. Raghunath Singh, L.M.P. (6) Demonstration of a case of Avitaminosis in the Government Headquarters Hospital, Nellore affecting the skin and the adoption of Cod liver oil therapy externally and internally. (7) Demonstration of a case of Renal Fistula. (8) Demonstration of a case of Chronic Osteomyelitis of left tibia at the upper and lower epiphyseal junctions.

General: We have to thank the members for showing the zeal and enthusiasm in the working of this Association which they have displayed this year. The increase in both the income and expenditure of the Association is a full proof of this. On account of the enhanced income, it has been found possible to make this institution a branch of the Indian Medical Association. We appeal to you to persuade such members of our profession who have not joined us as yet, to enrol themselves as members of the Association at an early date.

The Association had the honour of being addressed by the Hon'ble Dr. T. S. S. Rajan, Minister for Public Health, Government of Madras on 16-10-1938 in response to its invitation. In his interesting and inspiring lecture he gave very valuable advice to the members of the profession and finally dealt with the reforms in the administration of medical help in the province. We are exceedingly grateful to him for the trouble he has taken in coming down here and associating himself with the activities of our Association.

Now it becomes our pleasant duty to offer our heart-felt thanks to the authorities of the Government Headquarters Hospital for so kindly allowing

our Association to hold its various meetings in the hospital. We thank you all, Ladies and Gentlemen, for the kind co-operation you have given us and the keen interest you have evinced in the working of the Association.

Md. Abdul Latif Khan,
S. Raghunath Singh.
Jt. Secretaries.

MADURA MEDICAL ASSOCIATION

The monthly meeting of the Madura Medical Association was held in the Bungalow of the District Medical Officer, Madura, at 5 p.m. on Saturday, the 18th March, 1939. The members were first entertained to tea by Capt. and Mrs. Sheppard.

Dr. K. Srinivasa Raghava Iyengar, Retired Civil Surgeon, who had very kindly attended the meeting was voted to the chair.

The minutes of the last meeting were read and adopted. Two cases of interest were shown to the members by the Superintendent of the Government Headquarters Hospital, Madura. One was a case of partial excision of the pancreas with encouraging results for curing epilepsy, and another was a case of intrapelvic rupture of the urethra. A simple and effective way of a combination of retrograde and ordinary catheterisation was described to the members. In cases of rupture of the urethra with distension of the bladder, members practising in ill-equipped dispensaries were advised to prefer suprapubic puncture of the bladder to introducing a catheter to relieve the distension.

The Secretary moved the following resolution, which had been recommended by the Governing Body for the consideration of the General Body:

The Madura Medical Association read with interest the scheme of Co-operative Medical Relief, described by the Hon'ble Minister for Public Health in his address to the Seventh Andhra Medical Conference on March 4, 1939, and heartily approves of the scheme and promises the fullest co-operation of the Association in the successful working of the scheme.

The utilisation of the Common Good Fund of the Co-operative Societies in the furtherance of such a scheme is the most logical and just way at all times and in all countries and is the most productive of the "common good" in our country, which is suffering from a state of nation-wide disease and poverty.

While approving the caution of the Minister in making a small beginning in three Tamil and three Telegu districts to start with, this Association would suggest that permission and support must be given by Government to start such schemes in all districts where the local Co-operative Societies have got a sufficient amount in their "common good fund" and the inhabitants of a suitable area are eager to have a " co-operative medical relief society."

This meeting calls upon its members to pave the way for the success of this scheme by having informal talks with people in the villages on the matter and get the people to form societies and apply to Government for recognition.

This Association hopes that the medical men appointed for these dispensaries will not be hampered by official red tape but will be given a free hand and be encouraged to give of their best to the people placed under their charge.

To encourage medical men to choose this work in preference to setting up practice in the already overcrowded cities, this Association suggests that they may be encouraged to start societies in villages themselves and that early recognition may be granted to societies so started and that the medical men responsible for promoting the society be given the first option of refusing the appointment as medical officer of that unit.

As the scheme has immense possibilities and as its success will depend almost entirely upon the enthusiastic co-operation of medical men, this Association appeals to the Hon'ble Minister to frame the rules for the appointment and conduct of medical men in a form acceptable to the majority of the members of the profession.

In deciding upon the three Tamil districts where a beginning will be made in this direction, the Association hopes that the claims of the Madura district will be given due consideration. These are:

1. The remote places in the numerous hills and valleys of the district.

2. The endemicity of plague in the Cumbum valley and of malaria in that and other valleys.

3. The large influx of pilgrims from all over India and the consequent risk of the spread of communicable diseases into the interior.

4 The considerable amount accumulated in the "common good fund" (Rs. 10580/- on 30-6-38), of the Madura-Ramnad Central Co-operative Bank at Madura.

5. The paucity of hospitals and dispensaries including subsidised rural dispensaries in this district as compared with several others, and

6. Last but not the least, the informed and progressive views of the members of the profession practising in the district.

Seconded by Dr. K. G. Rambhadran, the resolution was passed unanimously.

On the motion of the Secretary, the General body sanctioned a sum not exceeding Rs. 55-8-0 towards the expenses incurred in the XI Annual Conference held in February.

Dr. H. S. Thomas then read an interesting paper on "Some Physico-Chemical Reactions of the Blood."

Dr. A. Narayana Menon, the Secretary, and Capt. F. A. B. Sheppard, the Vice-President of the Madura-Ramnad Red Cross Society, appealed to the members for their active help and co-operation to the Society particularly by becoming members of the Society, forming Ambulance Brigades, and organising a Blood Transfusion Service.

After a vote of thanks to the learned lecturer, to the chairman of the meeting and the hosts of the evening the meeting dispersed at 8 p.m.

M. K. NATESAN.
Secretary.

TINNEVELLY DISTRICT MEDICAL ASSOCIATION

A meeting of the Tinnevelly District Medical Association was held at Tiruchendur on Saturday, the 29th of April, 1939, under the presidentship of Dr. P. Janardhana Rao, L.M. & S., at 6 p.m.

The Secretary and Treasurer read out the minutes of the monthly meetings held at Palamcottah on the 25th of February, 1939 and 25th of March, 1939.

Dr. J. T. Moses, L.M.P., of Tiruchendur, exhibited a case of spleen on the right side. Dr. K. Rama Ayyar, M.B.B.S., read out notes on the following cases which were successfully treated at the Government Headquarters Hospital, Palamcottah:

1. A case of tumour (sarcoma) in the right shoulder.
2. A case of myelitis.
3. A case of stone in the bladder.

Each case was fully discussed by the members. Thereafter Dr. P. Janardhana Rao, L.M. & S., summed up the salient and important features of all the cases and their differential diagnosis in detail.

An excellent Dinner Party brought the happy gathering to a close at 9-30 p.m.

K. RAMA AYYAR,
Secretary and Treasurer.

SOUTH ARCOT BRANCH

The South Arcot Branch of the Indian Medical Association held their monthly meeting for April, 1939, on the 22nd April, 1939, at Cuddalore Headquarters Hospital premises.

Dr. K. V. Gopalkrishna Iyer, L.M.S., L.O., Asst. Dt. Medical Officer, South Arcot District, presided.

Dr. K. S. Appu Mudaliar, Civil Asst. Surgeon, delivered an interesting lecture on "The Injuries of the Elbow joint and their Treatment." There was also an interesting discussion.

There was a large gathering of the members who were entertained to tea by Dr. V. Krishnamurti, L.M.P., L.O., Secretary of the Branch.

The meeting terminated with the proposal of vote of thanks by the Secretary.

V. KRISHNAMURTI,
Secretary.

MEDICAL NOTES AND NEWS

MEDICAL COUNCIL OF INDIA

The Medical Council of India met for its Eleventh Session on the 3rd and 4th April 1939, under the Presidentship of Major-General E. W. C. Bradfield. Twenty-seven members were present.

2. It was decided that the office of the Vice-President should continue to be held by Dr. A. S. Erulkar. Dr. K. S. Ray was elected to the Executive Committee *vice* Rai Bahadur Dr. Maharaj Krishna Kapur whose term of membership of the Council had expired. Rai Bahadur Dr. A. L. Mudaliar. Rai Bahadur Dr. B. N. Vyas and Dr. B. C. Roy were re-elected to the Executive Committee.

3. The Council having considered their Inspectors' Reports on the Courses of Instruction and Examination at the Andhra University together with the University's observations thereon and having noted the improvements carried out since the last inspections, accepted the recommendations of the Executive Committee that the M.B., B.S. Degree of the Andhra University be recognised and placed on the first Schedule to the Indian Medical Council Act, 1933. It was decided that at the end of two years a further inspection of the Medical College, Vizagapatam be carried out with special reference to the progress of the extensions and improvements which the Council consider necessary so as to place the facilities for teaching on a more satisfactory basis. The Council will then consider as to whether such further progress as might have been made justifies the continued recognition of Andhra Medical Degrees. The improvements and extensions which the Medical Council of India consider essential were specified.

4. The Council accepted the recommendation of the Executive Committee that the further consideration of a letter received from the Registrar, Calcutta University, regarding retrospective recognition of the Calcutta Degrees by the General Medical Council be postponed till the next meeting of the Committee.

5. The Council noted that as requested the General Medical Council have included certain additional Higher Degrees of the Universities of Lucknow, Madras and Patna in Table 'I' of the British Medical Register.

6. The Council considered certain amendments to the Regulations some of which were referred back to the Executive Committee for further consideration.

7. It was decided that the next meeting of the Council be held on the 31st October, 1939.

The following is the text of the address delivered by the President:

PRESIDENT'S ADDRESS

GENTLEMEN,

I should first like to express my regret at the inconvenience caused to members by the unavoidable postponement of our meeting and my appreciation of your ready agreement to the altered dates. I considered it very necessary that important reports from our inspectors should be dealt with at this Session, and it was not possible to obtain the views of the University authorities concerned, as are required by our Regulations, in time for presentation on the original dates.

2. Since our last meeting the five-year term of most of the elected members has expired and fresh elections have been held. There have also been changes in the nominated members. I have, therefore, much pleasure in welcoming to our deliberations those of the elected and nominated members.

3. As decided by the Council at the last meeting a further inspection of the Courses of Instruction and Final Examinations for the medical degrees of the Andhra University has been carried out by your Inspectors. Their Reports and University's observations thereon, copies of which have already been supplied to you, are being placed before the Executive Committee, whose recommendation will come up for your consideration.

4. I mentioned at the last meeting that the Report of the Inspectors on teaching facilities and examinations in the subjects of Physiology, Pharmacology and Anatomy have been forwarded to the Universities concerned for their observations. So far the remarks of the Universities of Calcutta, Lucknow, Madras and the Punjab have been received in regard to all the subjects. The final decision of the Patna University on some items is still outstanding and that of the Bombay University has not yet been received.

5. Under the direction of the Executive Committee the replies received from the various Universities regarding the details of instruction given and examinations held at present in the subjects of Hygiene and Public Health and the various suggestions for improving the method of instruction in these

subjects including specially Rural Hygiene, were sent to Col. Phillips, Dr. Pandya and the Public Health Commissioner with the Government of India for opinion and suggestions. Their remarks have been received and are being placed before the Executive Committee for further consideration.

6. At their last meeting the Executive Committee resolved to request certain gentlemen to draw up standard forms for guidance of the Inspectors of your Council. The draft forms will be considered by your Executive Committee.

7. At the last meeting the Executive Committee considered the replies received from the various bodies whose examinations in the Preliminary Scientific subjects are recognised for the purpose of admission to the Medical Courses of the British Indian Universities regarding attendance at these examinations of a visitor or visitors approved by this Council. In accordance with the direction of the Committee the Medical Faculties of these Universities have been asked for copies of the last inspection reports of the Institutions which train students in the subjects of Preliminary Scientific Course of the Medical Curriculum and whether these subjects are treated as a part of the medical curriculum or as a Pre-Medical Course. The Faculties were further asked about the standard of requirements which the University may have laid down and which the Institutions concerned must possess before they are considered suitable by the University for training in those subjects. So far replies have been received from the Universities of Andhra, Calcutta, Madras, the Punjab and Patna. Further information is awaited from the Universities of Bombay and Lucknow.

8. I mentioned at the last session that at our instance the Central Government had requested His Britannic Majesty's Ambassador at Tokyo to ascertain from the Japanese authorities as to which of the Japanese qualifications were proposed for recognition by this Council so that arrangements may eventually be made for reciprocal recognition of medical qualifications between the two countries. The information is still awaited, and on its receipt the matter will be placed before you along with the recommendation of the Executive Committee.

9. As decided at the last meeting it has been recommended to the Central Government that steps should be taken to amend the Indian Medical Council Act, 1933, in order to make provision of the nature set out in clauses (a) and (b) of Section 120 (l) of the Government of India Act, 1935. In this connection your Executive Committee have also appointed a small Sub-Committee to consider in what other ways the Act might be amended. The report of the Sub-Committee will be placed before the Executive Committee when received.

10. As desired by your Executive Committee all the Universities included in the First Schedule to the Indian Medical Council Act of 1933 were requested to intimate the progress made in the teaching and examinations in the subject of Midwifery with reference to the inspections carried out by the Inspectors appointed by the Council. A return showing the number of labour cases available and the number of students trained during the year 1937 was also asked for. The replies received from the Universities are being placed before the Executive Committee.

11. At their last meeting the Executive Committee postponed the consideration of the decision of the Burma Government not to amend the Burma Medical Act in order to provide for the recognition of the Indian degrees included in the First Schedule to the Indian Medical Council Act. Meanwhile the Central Government have been approached in the matter and they have asked the Burma Government for reconsideration of their views. On receipt of the final reply the matter will be placed before the Executive Committee.

12. At the last meeting the Council noted the Government Notice sent by the Registrar, South African Medical Council, according recognition to the qualifications of the Universities of Bombay, Lucknow, Madras and Patna. A further Notification extending the recognition to the Universities of Calcutta and the Punjab has since been received.

13. Under the direction of your Executive Committee the Central Government were requested to negotiate with the Government of French Establishments in India with a view to determine a fair scheme of reciprocity between British and French India in the matter of recognition of medical qualifications and opportunities for recognised practice. It was also suggested to the Central Government that if the French authorities were not agreeable to enter into such an arrangement, steps should be taken to debar the French Nationals or the Diplomates of the School of Pondicherry from practising medicine in British India. In reply the Central Government have stated that the Provincial Governments are competent to undertake legislation prohibiting practitioners of French India who are not on the Provincial Registers from practising and that legislation by the Central Government is not at present contemplated.

14. A communication has been received from the Registrar, Calcutta University on the question of retrospective recognition of medical qualifications of that University by the General Medical Council. This will be given due consideration by your Executive Committee.

UNITED PROVINCES MEDICAL COUNCIL

Minutes of the meeting of the United Provinces Medical Council held in the Committee Room of the office of the Inspector-General of Civil Hospitals, United Provinces at Lucknow on 31st March, 1939:

1. The following resolution was passed unanimously, all standing:

"That the United Provinces Medical Council places on record its expression of deep sorrow at the sad demise of Dr. S. L. Sharma and of appreciation of the valuable services rendered by him as a member of this Council, and directs the Registrar to send a message of condolence to Mrs. Sharma and other members of the bereaved family."

2. The minutes of the last meeting of the United Provinces Medical Council held on 9th December, 1938, were confirmed.

3. The audit and inspection note on the accounts of the United Provinces Medical Council for the year 1937-38, with the Registrar's note of explanation, were considered and the Registrar's explanation accepted.

4. Resolved that the D. T. M. and H. and D. C. H. qualifications, granted by the Royal College of Physicians of London and the Royal College of Surgeons of England, be registered as additional qualifications.

5. The Council unanimously rejected the suggestion that Sanitary Inspectors and vaccination staff should be trained and authorized to inoculate against cholera and plague. The Council came to this decision after mature consideration and on weighty grounds, as the risks involved would be too serious.

6. Some of the members of the Council having testified that to their knowledge Dr. Mahudavalla had done nothing to warrant the removal of his name from the register, it was unanimously decided that Dr. Mahudavalla's name should be included in the register.

7. Resolved that the name of Dr. Surendra Singh, M.D. (Vienna), may be registered.

8. It was resolved that the name of Dr. Kishori Kumar Mathur, M.D. (Vienna) may be registered.

9. The case against Dr. Jagannath Prasad Sinha, M.B.B.S. (Regn. no. 2853) of Benares, was considered.

It was resolved unanimously—

"That the Council do judge Dr. Jagannath Prasad Sinha to have been guilty of infamous conduct in a professional respect and do direct the Registrar to erase from the medical register the name of Dr. Jagannath Prasad Sinha.

Dr. Jagannath Prasad Sinha may, however, apply for his name to be registered in the Medical Register at the end of twelve months. He must then satisfy the Council that he has not done anything against the code of medical ethics.

10. The report of the Standing Committee which met on the 30th March, 1939, was read and their recommendations were accepted.

11. The Council unanimously endorsed the following resolution of the United Provinces Branch of the Indian Medical Association:

"Resolved that in sub-section (viii) of section 2 (Part II) of the United Provinces Indian Medicine Bill, 1938, published in the *United Provinces Gazette* of 19th November, 1938, Part VIII the words 'Registered Practitioner' be replaced by the words 'Registered Vaid' or 'Registered Hakim' and that a copy of this resolution be forwarded to the Hon'ble Minister and another to the President, United Provinces Medical Council," and also suggested that the words 'registered vaid or hakim' be substituted for the words 'registered practitioner, registered medical practitioner, or duly or legally qualified practitioner' wherever these words are used in the Bill, and the words 'Ayurvedic and Unani' be added before the words, 'medicine,' 'surgery or midwifery' in section 39 of the Bill.

12. The Council unanimously endorsed the following resolution passed at the United Provinces Medical Conference held at Agra in October, 1938:

"Resolved (*a*) that this Conference notes with concern the increasing evil of quackery in United Provinces where all sorts of suffixes and prefixes simulating recognized medical degrees or diplomas are being assumed freely by unqualified persons to advertise themselves as qualified medical men and requests the Government to take necessary measures to protect the public and the profession from the consequences of this evil, and

(*b*) that in the opinion of this Conference it is now high time that the Government should make it a penal offence for anyone to use the prefix Doctor or Dr. before his name unless he possesses a degree of doctorate from any recognized university or possesses a medical qualification from one of the medical institutions recognized either by the Indian Medical Council or one of the Provincial Medical Councils or both."

BENGAL MEDICAL COUNCIL

Abstract of the Proceedings of the Council of Medical Registration, Bengal, at their meeting held on 17-1-39:

The term of members under clauses (f) and (g) of section 4 of the Bengal Medical Act, having expired since the date of the last meeting, the follow-

ing gentlemen were elected at the election held in the meantime:

Dr. S. K. Mukherjee, D.O., D.O.M.S., F.R.C.S., Dr. S. C. Sengupta, M.B., ch.B., M.D., F.R.C.S.

Similarly the following gentlemen were elected under clause (f):—

Dr. Taraknath Ghosh, M.B., Dr. Kalikinkar Sengupta, M.A., B.SC., M.B., D.T.M., Dr. Santoshkumar Chatterjee, M.B., F.R.C.S. and Dr. Basantakumar Ghosh, M.B., D.T.M.

2. The revised regulations for the Licentiate Examination, raising the course to 5 years and requiring I.Sc. as the preliminary qualification which were recommended in March 1937 were awaiting Government orders pending the views of the All-India Conference at Delhi on Medical School Education. The Council have proposed a deputation to wait on the Hon'ble Minister in charge to explain the urgency of the question.

3. The Budget-Estimates for 1939-40 approved by the Council showed that against an expenditure of Rs. 14,535/- (besides free printing at the Government Press) the receipts from registration fee etc. would amount to Rs. 8,250/-. The Council therefore needed a Government-grant of Rs. 6,280/- or at least Rs. 6,000/- (besides free printing), as against Rs. 4,500/- hitherto taken as the normal grant. A loan of Rs. 2,000/- taken from the Faculty in 1936-37 would still remain unpaid. At their previous meeting the Council had proposed to Government to receive a deputation from them to explain the financial position.

4. Dr. B. C. Roy, M.D., M.R.C.P., F.R.C.S,, was elected as representative of the Medical Council, in the Bengal Nursing Council.

5. The following members were appointed to form the Penal and Ethical Cases Committee:—

Lt.-Col. T. C. Boyd, F.R.C.S., D.P.H., I.M.S., Dr. B. C. Roy, M.D., M.R.C.P., F.R.C.S., Dr. S. K. Mukherjee, D.O., D.O.M.S., F.R.C.S., Dr. J. C. Chatterjee, L.M.S., and Dr. A. D. Mukharji, L.M.F.

6. The following members were appointed for the School Inspection Committee:—

1. Lt.-Col. T. C. Boyd, F.R.C.S., D.P.H., I.M.S., 2. Dr. S. K. Mukherjee, D.O., D.O.M.S.. F.R.C.S., 3. Dr. K. S. Ray, M.A., B.SC., M.B., ch.B. 4. Dr. J. C. Chatterjee, L.M.S. and 5. Dr. A. D. Mukharji, L.M.F.

7. The following members were appointed for the Examination (Faculty's) Inspection Committee on behalf of the Council:—

1. Dr. S. K. Mukherjee, D.O., D.O.M.S., F.R.C.S.
2. Lt.-Col. B. G. Mallya, M.D., F.R.C.S., I.M.S,

8. The Council at their previous meeting had resolved that in the present conditions of the Ronaldshay Medical School (Burdwan) and Lytton Medical School (Mymensingh) their affiliation could not be continued further. Both are Government schools, and on intimation from the Surgeon-General that action was being taken to remove the main defects, the Council extended the affiliation by one year, and in the meantime a further report from the Inspection Committee as to the progress made would be examined.

COL. SOKHEY ON AYURVED AND UNANI

Ayurvedic and Unani systems of medicine, although they had contributed to a great extent to human knowledge in their own time, had now been rendered out of date because of the greater advancement of science, was the argument advanced by Col. S. S. Sokhey, Director of Haffkine Institute, broadcasting a talk on "Hippocrates Abroad" from Bombay Station recently.

Though those systems of medicine provided a number of quite valuable drugs, he said, the systems themselves were based on quite fanciful and erroneous theories. Science had not progressed far in those days and the instruments and methods for the study of disease which were available at the present day were not at the service of the physicians of those times.

Medical aid did not consist in the giving of something at random to a sick person. The ability to accurately diagnose the disease and the availability of drugs were the two main factors. It had been argued by supporters of the indigenous systems that Western drugs were expensive and that there was a dearth of properly qualified medical practitioners in the rural areas, while on the other hand indigenous drugs were cheap and the administrators of such drugs were available to the poorest man. Such problems, Col. Sokhey observed, were there and had to be solved. If drugs were manufactured in this

country and with the State aid, they could be much cheaper. With regard to medical practitioners, they wanted persons with a thorough knowledge of the science. It might take time to train them, but in the transitional period they could make use of all aids which could be readily brought into service. The best course would be to train health visitors and to make them work in centres under trained medical men. Travelling dispensaries were another useful device.

"In the discussion of the relative merits of modern scientific medicine and indigenous systems of medicine," Col. Sokhey said, "sight is lost of a very important consideration. The main objective of scientific medicine is to discover the cause and understand the nature of disease with a view to abolishing it altogether. Treatment of disease assumes importance only because knowledge is still defective and we are not yet able to prevent all diseases. Ayurvedic and Unani systems have little to contribute in this direction.

"In order to view the whole matter from a proper perspective we must remember that scientific medicine is based on all available human knowledge, past or present, and that Ayurvedic and Unani systems have contributed not a little to the development of the scientific point of view. In their own time and place these systems were a great contribution to knowledge, but man, utilising all that these systems had to teach, has made further and more remarkable advances. To take our rightful place in the world of science we must labour to make as valuable contribution to our present knowledge as our ancestors made in the past. Any effort on our part to go back to the past would not only be a denial of a vast body of most valuable knowledge which is as much ours as any one else's but would sterilise still further our effort to add to the world fund of knowledge. We have the capacity and the ability to take a proper place in the world of science. We have already begun to make great contributions to the sciences of Chemistry, Physics and Biology and I am sure we can similarly enrich the science of medicine, if we will but labour hard enough."

COL. JOLLY APPOINTED D.G., I.M.S.

Col. G. G. Jolly, Inspector-General of Civil Hospitals, the Punjab, has been selected for appointment as Director-General of the Indian Medical Service, in succession to Major-General E. W. C. Bradfield, who leaves India in September to take up the appointment of Medical Adviser to the Secretary of State for India.

DR. B. S. SHROFF MEMORIAL MEDAL

"Alcohol and Alcoholic Drinks—their use and abuse in India, with special reference to their effects on Health and Disease" is the subject selected by the Bombay Medical Union for competitive thesis for the above Prize for 1939. The award will be in the form of a Gold Medal called the Dr. B. S. Shroff Memorial Gold Medal of the Bombay Medical Union.

The competitor must be (i) a duly qualified member of the medical profession holding a degree or degrees and diplomas from Indian and other Universities created by statute, or (ii) a duly qualified member of the medical profession holding the diploma of Membership of College of Physicians and Surgeons of Bombay.

The thesis must be sent in six typed copies so as to reach the Honorary Secretaries, Bombay Medical Union, Blavatsky Lodge, Building, French Bridge, Chowpatty, Bombay, on or before the 31st October, 1939. The thesis should be designated by a motto instead of the writer's name and should be accompanied by a sealed cover containing the name of the writer and his Post-Office Address.

The name of the Prize, the year of competition, the subject of the thesis, and the writer's motto should be superscribed on the cover.

No study or essay that has been published in the medical press or elsewhere will be considered eligible for the Prize, and no contribution offered in one year will be accepted in any subsequent year unless it includes evidence of further work.

The accepted thesis shall be the property of the Bombay Medical Union.

In the award of the Prize to the successful candidate, the decision of the Committee shall be final.

PLANNING DIETS

The Health Bulletin on The Nutritive Value of Indian Foods and the Planning of Satisfactory Diets,

a second edition of which is just brought out, will make it easy to plan diets. Data have been collected about the composition of some 250 food-stuffs and the publication is a part of the move to popularize the results of nutrition researches. The Bulletin gives caloric requirements and standards suitable for the various age and sex groups in India. Protein, fat, and various vitamins and minerals are also dealt with, with special emphasis on the minimum requirements of each.

There is a long list of diseases, common in India, due in some way or other to dietetic causes. Such are: beriberi, certain anæmias of pregnancy, keratomalacia, osteomalacia. Besides these, states of malnutrition which fall short of serious disease are widespread and very seldom receive any attention. A well-balanced diet is essential if growth and development are to take place normally. The frequency of minor ailments in school children can be removed by improving the diet. But well-balanced diets are in general more expensive than deficient ones. It is, however, possible to make effective improvements with little increase in cost, if information about protein, fat, carbohydrate, calcium, phosphorus, iron, calories and vitamins, is known.

Human beings, and particularly children, cannot thrive at their best on a diet largely composed of cereals such as rice, millet, etc., and insufficiently supplemented by other foods. To make good the deficiencies of such a diet, they must consume fair quantities of foods like milk, green vegetables, eggs, fruits, etc. These are sometimes known as the "protective" foods, since they are rich in proteins, vitamins and mineral salts, and protect the body against the ills which result when the diet is largely based on less nutritious foods, such as milled rice. Cod-liver oil, which is very rich in vitamins A and D, may be classed as the most valuable "protective" food.

In drawing up a new diet-schedule, or in assessing the value of an existing schedule, it is essential to know whether enough food is being provided. It might be thought that it is easy enough to discover food deficiency, for such deficiency must cause hunger. But experience has shown that human beings can adapt themselves, at a low level of vitality and with their powers impaired, to an insufficient ration, and scarcely realise that they are underfed. The nutrition worker, in setting up standards of food requirements, ignore this remarkable faculty of the body to adapt itself to semi-starvation. His standard of food intake implies full satisfaction, enough to enable human beings to lead an energetic life at a reasonably high level of working capacity.

There are, of course, many kinds of public health nutrition work besides the planning of adequate diets. The task of the nutrition worker is often to make special additions (*e.g.*, milk, cod-liver oil, various vitamin-rich preparations) to an unsatisfactory diet rather than to plan the whole diet afresh. Infant feeding is a subject demanding special knowledge and training. But in all branches of practical dietetics the fundamental principles involved are the same, and an understanding of them is essential for successful work in this field. (Science and Culture).

FRESH BLOOD VERSUS BLOOD BANK TRANSFUSIONS

The Cook County Hospital in Chicago has civilised the Russian method of preserving cadaver blood and using it for subsequent blood transfusions, and has inaugurated a blood bank for the purpose of supplying preserved blood from living healthy volunteer donors. Other institutions have taken up the idea. The term blood bank signifies the preserving of citrated blood to be used for future blood transfusions. The blood is drawn into 500 c.c. chilled sterile flasks which contain 70 c.c. of 2·15 per cent. sodium citrate solution. At the same time, 5 c.c. of blood is collected into two test tubes for typing and for a Wassermann test. The blood is then taken to the solutions laboratory, properly labelled, typed, tested for sterility and the absence of syphilis and filed away in the refrigerator at a constant temperature of between 4° and 6° centigrade. Before using, the blood is cross-matched against the patient's blood.

Asking patients or prospective patients to donate their blood, perhaps to strangers, to which they might object, or taking blood from patients who might very well need that extra amount of blood at a later date, the trouble and additional labour and expense of collecting, labelling and preserving numerous flasks of blood and determining when to discard the blood as too old or perhaps partly hæmolysed, offers, according to Perry J. Manheims of New York,

too few advantages and too many disadvantages to be recommended as the method of choice over the use of fresh whole blood.

The blood bank method entails extra expense to the hospital, and complicates a moderately simple procedure. Fantus says that citrated blood should not be kept more than ten days, because of reactions in some cases due to hæmolysis and that an average turnover of six transfusions a day is necessary for the successful operation of a blood bank (*Medical World*).

PULMONARY TOMOGRAPHY

The value of pulmonary tomography, as based on their personal observation of 200 cases, was the subject of a paper read at the November 4, 1938, meeting of the Societe medicale des hopitaux of Paris by Dr. Leon-Kindberg and his co-workers. The underlying principle of tomography, *i.e.*, examination in section, is to eliminate shadows due to the ribs, clavicle and sternum in the X-ray examination of the lungs, so that a single area can be studied in detail. The 200 examinations included 155 on patients with pulmonary tuberculosis and 45 on patients with cancer, pulmonary abscess, cysts and bronchiectasis.

This recent method has the following advantages: 1. It gives details as to the topography of lesions. 2. It yields information as to obscure or complex foci. 3. It shows some lesions which escape detection by other methods. 4. It permits study of the structure and evolution of lesions. The method has been sufficiently perfected so that no failures were noted in more than 2,000 films. A pitfall observed by others in the form of "false cavities," *i.e.*, defects diagnosed as such but in reality due to faulty interpretation of the films, was not encountered by the authors. As to added expense, this cannot be an objection, because the stratigraphic (tomographic) method permits earlier diagnoses to be made. It has almost completely supplanted the older methods in the service of Dr. Leon-Kindberg at the Hopitaux Beaujon in Paris. A number of slides illustrating the advantages of tomography were shown. (*J. A. M. A.*).

THE CAMERON PRIZE WINNER

It is quite appropriate that Prof. Gerhard Domagk should be given the Cameron prize of the University of Edinburgh which was awarded to Pasteur in 1889 and to Ehrlich in 1914. With the discovery of Prontosil by Domagk and his chemical collaborators, Mietzsch and Klarer of the I. G. Farbenindustrie (Bayer) at Elberfeld, we are in a better position to treat bacterial infections than we were four years ago.

Domagk is a Brandenburger, 43 years old and titular professor at Munster. Graduated at Kiel in 1921 he became an assistant to Hoppe-Seyler. Appointed to a readership in pathology at Greifswald in 1924 he worked on the part played by the reticulo-endothelial system in the destruction of organisms and soon turned his attention to the reinforcement of the body's defence against bacterial infections. After having failed in his attempts to isolate substances from the reticulo-endothelial tissues which can cause a breakdown of bacteria he started investigations on chemical disinfectants at the I. G. Farbenindustrie laboratories at Elberfeld where in 1927 he was appointed director of the department of experimental pathology and bacteriology. Taking clue from the works of Eisenberg (1913) and Ostromislensky (1930), Mietzsch and Klarer on a number of azo dyes Domagk found out in 1932 that one of the dyes containing sulphonamide group had some action on mice infected with streptococci. Though this experimental observations on the action of Prontosil was made in December, 1932, it was not published until March, 1935 and in the intervening time the new drug was tested by German clinicians in a number of infectious condition. Later in 1935 Domagk and his collaborators prepared another drug Uleron which was found effective in gonococcal conditions. (*Lancet*).

AN EMERGENCY OBSTETRIC SERVICE

An emergency obstetric service is being introduced in this country and has just come into force in London. The object is to deal with the acute obstetric emergencies of patients who cannot be moved to a hospital without undue risk and who cannot be adequately dealt with by the consultant obstetric service of the borough in which they live. The new service is designed not as an alternative to hospital treatment but solely for cases in which removal to a hospital would be dangerous. It is anticipated that the majority of patients for whom it will be used will be suffering from postpartum hæmorrhage, and the

emergency unit will have available the apparatus for blood transfusion.

In London the physician or midwife in charge will send a telephone message to the London County Council Ambulance service and ask for the emergency obstetric service, giving the patient's name and address and the nature of the emergency. The emergency unit, consisting of an obstetric surgeon, a midwife and the appropriate equipment, will be sent as speedily as possible to the patient's house. Should blood transfusion be necessary a supply of stored blood will be readily obtained from the council's hospitals. Midwives have the right to call out the emergency service only if they find it impossible to obtain a physician and they find the emergency grave. The local borough council will be responsible to the obstetric surgeon for an inclusive fee of 26 dollar for patients who cannot afford to pay his ordinary fee but reserves the right to ask the patient's husband to contribute a portion or the whole. (*J. A. M. A.*).

CONTRIBUTORY SCHEMES FOR HOSPITALS

Not long ago all the hospitals were described as "voluntary" because they were supported by voluntary contributions for the service of the poor, who received free treatment; but in recent years the system of patients' making contributions has been introduced. Speaking at the British Hospital Schemes Association, Lord Horder said that there were at least 400 such schemes in the country, which raise annually more than dollar 17,500,000. The rates of contribution varied from 2 to 8 cents a week. It was estimated that contributory schemes provided about one third of the annual income of all voluntary hospitals in the provinces. They ranged from the Hospital Saving Association of London, with a membership of nearly 2,000,000, to associations in rural communities around small cottage hospitals, with memberships as small as 1,000. In return for his weekly payment the wage-earner obtained immunity from investigation into his financial circumstances and immunity from any charge when admitted to a hospital. In most cases he and his dependents also got a variety of auxiliary services free, convalescent home, ambulance, transport and home nursing. The aim should be full cost of maintenance. Whether any payment should be made to the physician out of contributory funds was a moot point. The logic of the position demanded that it should, but the physicians' claims were at present waived. The generosity of the profession, however, should not be too long abused. In recent years the municipal hospitals, which are supported by the local authorities, have greatly developed, so that they now supply a service comparable to that of the voluntary hospitals. Lord Horder thought that the maintenance of the two on parallel lines was wasteful; collaboration between them should be organized regionally. (*J. A. M. A.*).

CORRESPONDENCE

The Editor is not responsible for any views expressed by the correspondents.—ED., *J. I. M. A.*

CEREBROSPINAL FEVER

THE EDITOR,
Journal of the I. M. A.

SIR,

With reference to the article on cerebro-spinal fever which appeared in your issue of April, 1939., Vol. No. 7, it is rather surprising to find that the writer has not consulted the literature about the work done on that subject in this country, while he has extensively quoted from various foreign literatures.

As one knows from experience that in dealing with epidemics, the manifestations of an epidemic disease vary a great deal in different countries, both in the predominance of particular symptoms as well as in the severity of form and the fatality rate. Moreover, they vary even in the same country from one epidemic to another.

Hence it would have been better if he had tried to put his observations and experience of Calcutta epidemic and compared with that of others in this country. Perhaps the writer does not know that accurate observations and records about this disease have been made at least from 1922 in Bombay, and have been published from time to time in various papers before the medical societies and also in the journals.

I would particularly ask the writer and others interested in this disease to refer to my book on "Infectious Disease and other fevers in India", as well as to the articles such as one in *Lancet* of 1926 on the 'Experience of Meningitis in Bombay', one published in your esteemed Journal in August, 1936, and also to the paper read at the All-India Medical Association Conference of 1938, held at Meerut.

I am giving here the incidence and certain features of this disease which I have noticed recently in Bombay.

Year	*Admissions in the City Fever Hospital; Arthur Road, Bombay.*
1934	52
1935	183
1936	338
1937	240
1938	250

(1) Recent observations on the various types of meningococci showed that group I was the most predominant one now, as compared to the epidemics of 1922 and 1923 when group II was the predominant type.

(2) With regard to the prognosis we have found that hæmorrhagic eruptions, cyanosis, and encephalitic symptoms prove invariably fatal and so is the development of hydrocephalus in the later stages.

Loss of consciousness, violent delirium and persistent insomnia do indicate a gravity of condition, as they are the characteristics of a severe type, but there is every chance of recovery in such cases if they are treated early and efficiently, especially with the use of new drugs., *viz.*, sulphonamide group of drugs.

(3) Treatment—Curative: We have used various types of anti-meningococcus sera and have found that those prepared by Bengal Chemical Pharmaceutical Works, Ld. and Bengal Immunity are in no way inferior to the foreign sera, as far as potency is concerned, and as there is something to be said in favour of sera prepared from local strains we prefer them to others.

Moreover, now we have discarded the intrathecal use of sera, as we have found that serum given intramuscularly in a fairly large (100 c.c. daily) doses for the first few days, along with treatment by sulphonamide group of drugs, is found to be very successful.

Though different observers have found varying results in my experience, I have found that treatment by sulphonamide group of drugs has definitely reduced the mortality rate to a considerable extent and it should be used as a routine in all cases.

I am etc.,

Dated 17th May, 1939.

P. T. PATEL, M.D. (Lond.), M.R.C.P. (Lond.), D.T.M. & H. (Cantab.),
City Fever Hospitals, Arthur Road, Bombay.

CEREBROSPINAL FEVER

THE EDITOR,
Journal of the I. M. A.

Sir,

I appreciate very much the pains Dr. Patel has taken to go through my paper on "Cerebrospinal Fever".

I discussed the disease from different aspects noting both its usual and unusual manifestations and

also the treatment. I have fortified these observations by quoting references. These contain several from observers in India, such as Morehead, Macphers, Chevers, Ewart, Goodeve, Duka, Russel, observers in the Campbell Hospital, Calcutta, the Sanitary Commissioner's report and a paper by my humble self.

Undoubtedly, in addition to those mentioned many other papers (also books) were published in India and in other countries. The reason for not referring to every one of them is the absence of any special additional virtue relevant to my paper.

But this apparently has put out Dr. Patel who opined that "it is rather surprising to find that the writer has not consulted the literature about the work done on that subject in this country". He would particularly ask the writer and others to refer to his own works. These consisted of a book published about ten years ago and as far as I could find, did not reach the second edition and two other papers in medical journal. I do not want to discuss their merits or reputation any more than what I said already but if these only are to be considered the sum total of Indian medical literature on the subject which must be referred to and nothing else I have nothing to say.

The other parts of the criticism consisted of his personal observations on some items and it is not necessary for me to criticise these in a reply. But I must add Dr. Patel has given an incorrect version of my remarks about locally prepared sera which is not warranted.

I am etc.,

Dated
3rd June, 1939.

A. R. MAJUMDAR,
Medical College Hospital, Calcutta.

INSANITY DUE TO ATEBRIN

THE EDITOR,
Journal of the I. M. A.

Sir,

It was interesting to read a case reported of insanity due to atebrin in pages 413 and 414 of our Journal for the month of April, 1939, and your remark at the end.

Your remark is certainly justified as far as the proof and the scientific aspect are concerned, but I have observed similar thing in 2 cases and a friend of mine (a medical man) in another case *i.e.*, I know of 3 cases in which malaria cases treated with atebrin have developed insanity. A private practitioner does not start the treatment with the scientific exactitude required for scientific proof, but in my mind I am certain that the maniacal symptoms in the two cases seen by me were due to atebrin. At least one of the two cases had no other treatment except atebrin and my friend tells me that the third case referred by me above also developed the maniacal symptoms after atebrin.

I personally think that the atebrin if given in heroic doses probably leads to these symptoms and that this complication is very rare. Secondly, the complication is neither fatal nor permanent, as all the three cases recovered completely, but the convalescence is naturally very prolonged. Thirdly, the mania is of religious type at least in all three cases I am referring to, it was this type and the mania when at its worst can sometimes be of fairly violent form. One case had to be actually tied down before he could be controlled. Morphia and other drugs failed to act.

This subject requires further study and in a more systematic way. Two questions are very pertinent, as just why should atebrin lead to this effect on the brain and secondly, why should mania be of religious type. This is very curious effect though interesting. But one thing more I may mention. All the three cases I have described above were hindus—one girl of about 12 or 13, one boy aged about 14 and the third, a well educated hindu male of about 30 or 35, not particularly religious in temperament, and a healthy good sportsman. If it is only a coincidence, it must be a very strange one and certainly requires further investigation. These cases were discussed at one of the meetings of this branch last year, but for want of proper scientific data and observations, no definite conclusion could be reached, but it was decided to be more careful in prescribing atebrin doses in future.

Jhansi,
May 19, 1939.

I am etc.,
H. N. SHIVAPURI, CAPT., I.M.S., M.B., B.S.

ERRATUM

May, 1939 issue, page 503, line 12, 2nd column.
Instead of 559 *please read* 596.